

Programmer's Paradise®

Fall 1992

FREE MULTI-MEDIA DEMO!

See page 125.

A Division of Voyager® Software Corp
\$2.95



Pages 8-9

Special OS/2 Development Tools Section!

PAGES 39-41

Q&A with Gordon Eubanks!

President & CEO,
Symantec Corporation
Pages 15-16

Feature Articles Inside:

Why Develop on OS/2 2.0?
by Brian Proffit, IBM

OS/2 2.0:

A Development Platform
by Geno Coschi, WATCOM

BRIEF for DOS & OS/2
by Deborah Herath,
Borland International

Writing Cross-Platform
Applications with
New Visual Basic for DOS
by Steve Podradchik,
Microsoft Corporation

Porting DOS Applications
to Windows
by Neville Franks,
Soft As It Gets

PROGRAMMER'S PARADISE

1163 Shrewsbury Ave
Shrewsbury, New Jersey 07702
(800) 445-7899



Bulk Rate
U.S. Postage
PAID
Programmer's Paradise

*****5-DIGIT

More of the
World's best
Software
Development
Tools
from
BORLAND

THE LEADER IN
OBJECT-ORIENTED TECHNOLOGY

**ObjectVision
Professional**
-the Developer's
Visual
Programming tool

New! **ObjectVision Pro** combines the ease of visual programming with the power of C/C++ so that you can create great Windows programs and dramatically shorten your development cycle. It comes complete with everything you need

including ObjectVision 2.1, a graphical report writer, SQL Connection and Turbo C++ for Windows.

• **Build Applications Visually**

Build your own Windows database applications VISUALLY! Build any data structure—from a simple flat file to complex relational databases. Easily create and directly access databases in dBASE, Paradox, and Btrieve formats. Create and print forms with ObjectVision's WYSIWYG form tool. And the runtime is included FREE!

• **Create Great-looking Reports**

ObjectVision Pro's full-featured graphical report writer lets you create custom reports for your ObjectVision Pro database or any data-

base that uses the dBASE, Paradox, or Btrieve file format.

• **Far-Reaching SQL Connectivity**

Now connect to SQL database and access data from Sybase, MS-SQL Server, and DB2 (using the MDI gateway). With the ObjectVision Pro SQL Connection your applications can have the flexibility of accessing almost any type of data, even across large networks.

• **Easy C/C++ for Windows**

The Turbo C++ for Windows component of ObjectVision Pro provides full ANSI C and AT&T CFRONT C++ 3.0 support. And when coupled with the Windows-hosted IDE and comprehensive visual tools, you have the easiest way to create custom DLLs or full Windows programs.

ObjectVision Pro for Developers—The easiest way for programmers to create Windows Applications.



List: \$495

Programmer's Paradise® Price:
\$349

BRIEF

-the Programmer's Editor

BRIEF, now from Borland, is the most widely used programmer's editor for both DOS and OS/2. It's the editor of choice when programmers need speed and macro language capability. And BRIEF now supports DOS and OS/2® platforms in the same box.

BRIEF's Powerful Features Include:

• **Complete Development Environment**

The Brief Environment includes search/replace, block operations, configurable keyboard, multiple windows, bookmarks, and mouse support. Everything you ever wanted in an editor!

• **Powerful Macro Language**

BRIEF includes a comprehensive C-like macro language, with its own macro compiler and source level debugger. Modify and extend BRIEF to suit your programming needs.

• **Compilation within the Editor**

Enables the programmer to edit and compile a file, then be returned to the editor with error messages displayed and the cursor positioned on the proper line of code—a tremendous productivity booster and time saver!

• **Multiple Language Support**

BRIEF supports all of the most widely-used compilers including Borland C++, Turbo Pascal, dBASE and Assembly.

• **Window Support**

Multiple windows that provide a quick reference to many files simultaneously, resizable windows that improve the flexibility of your work space and zoom capabilities for a fast, full view of code being edited.

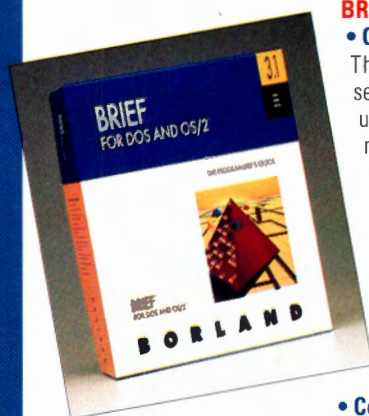
• **Undo/Redo**

Undo or redo any command up to 300 times, so experiment freely without the risk of losing your original code.

• **Extended Memory Specification Caching**

Get greater access to your computer's memory. Pull up an entire file, rather than one section at a time when your code needs to be revised.

With all of these features, no wonder more programmers worldwide have made BRIEF their editor of choice. Now it's your turn.



**BRIEF for DOS
& OS/2:**
~~\$249~~ **\$95**

B O R L A

Borland C++ & Application Frameworks 3.1

with full support for Windows 3.1,
a Free CASE Tool and
Template Support!

Borland C++ is the choice of professional C and C++ programmers for Windows and DOS application development. With more than 650,000 copies of C++ shipped, Borland continues to set the standard.

Full Support for Windows 3.0 and 3.1

Borland® C++ fully supports Windows 3.1 as well as Windows 3.0 and supplies example programs to help you master all the advanced features of Windows 3.1 such as Object Linking and Embedding (OLE), Multimedia, Pen and TrueType fonts. Of course, full support for Dynamic Link Libraries (DLL), Multiple Document Interface (MDI) and Dynamic Data Exchange (DDE) is also included.



New! Optimizing Windows Development Environment

With Borland C++, you can edit, compile, optimize and run your programs all from within Windows. The Windows Integrated Development Environment (IDE) includes powerful multi-window editing,

color syntax highlighting, the ObjectBrowser™ that graphically shows relationships between objects and allows you to quickly navigate through your source code, the SpeedBar™ for quick access to common functions, and instant online help that includes a complete reference to the Windows API.

Everything You Need to Create Windows Applications

Borland C++ gives you everything you need for robust, sophisticated Windows programming. The Resource Workshop lets you visually create three-dimensional Windows resources such as buttons, icons, menus and more for your Windows applications. WinSight™ tracks Windows messages visually to make Windows debugging easier, and the help compiler enables you to make great Windows help files in a snap. WinSpector helps you trace UAEs. The Borland integrated resource compiler WINDOWS.H is also included for full Windows 3.0 and 3.1 support, including Multimedia, Pen, OLE, DLLs, DDE and MDL.

Free CASE Tool!

The Protogen CASE tool, a \$495 value, is now included with Borland C++ and Borland C++ & Application Frameworks.

Only Borland's C++ Gives You Application Frameworks for DOS and Windows

Get intuitive, ready-made user interfaces for Windows and DOS. Simply plug an application framework into your application to cus-

tomize it any way you wish. High-level objects are ready to bolt on with just a few lines of code. Add an editor in just one line! Automatically inherit windows, dialogs, menus, and mouse support.

Borland C++ 3.1 Supports Templates

"Templates will change the way we perceive C++ class libraries"... "and after months of working with Borland's implementation, I'm impressed! They have done an outstanding job."

—Dr. Thomas Keffer, President of Rogue Wave Software

Why Templates? Have you ever found yourself writing a linked list of integers, then two days later, needing one for character strings? You find the old code, cut and paste, do a global replacement of "char" for "int" hoping that you get them all (but not too many!).

Templates offer a better way! You write the code once, leaving the actual type of the list as a parameter, to be specified later. If you do it right, you don't ever have to do it again!

But, with Rogue Wave's Tools.h++, you don't even have to do it once!

Rogue Wave Tools.h++ features include:

- A powerful String class that uses copy-on-write technology for the ultimate in efficiency.
- A Regular Expression class for pattern matching, including search and replace.
- A Tokenizer class to break strings up into separate tokens.
- Time and Date classes that make payroll calculations easy!
- A complete set of Smalltalk-like collection classes such as Bag, Set, OrderedCollection, SortedCollection, Dictionary, etc.
- B-Tree class for efficient keyed disk storage and retrieval.
- File Manager classes for allocating, de-allocating and coalescing space within a file.
- Virtual and Buffered Page Heaps to manage objects bigger than 64k.
- A Virtual Array class that allows arrays of any size.
- Many other classes: Bit vectors, virtual I/O streams, cache managers, error handling, and many more!
- Source code!
- Windows 3.X compatibility! (Tools.h++ can be compiled as a DLL, reducing the size of your application!)

**Borland C++ 3.1 with Free
Protogen and Tools.h++:**

\$449

**Borland C++ 3.1
and Application
Frameworks
with Free
Protogen and
Tools.h++:**

\$649



ND

CALL

Programmer's Paradise

1-800-445-7899

Contracts Software for Computer Industry Transactions

QuickForm Contracts (Consultant's Version) is a \$195 (list) "expert system" software package created especially for technical consultants, contract programmers and their customers. QuickForms prompts you with multiple choice questions and automatically creates a complete "near custom" agreement weighted to your side of the transaction:

- ✓ Nine Categories of Computer Industry Agreements
- ✓ Millions of Variations Possible, Each in 10 Minutes
- ✓ Transfer Any Document to Word Processor for Editing
- ✓ Identifies Issues, Saves Time, Prevents Costly Mistakes
- ✓ Manual is Lively Executive Overview of Computer Law
- ✓ Created By Computer Lawyer and a Prof. Programmer
- ✓ Widely Acclaimed, Nominated '92 Wash. Tech. Award

This special consultant's version incorporates over 400 pages of custom-drafted contracts clauses, reflecting a two year drafting effort by an experienced computer lawyer. Documents give your organization a professional image. IBM/DOS.

Categories include: System Acquisition & Development Agreements; Professional Service Agreements; Software License Agreements; Software Maintenance Agmts; Software Marketing & Distribution Agmts; Finder's Fee/Commission Agmts; Confidentiality (Nondisclosure) Agmts; Teaming Agmts; Technology Escrow Agreements. Upgrade to Pro Version Available.

Here's what the legal experts are saying...

"One of the slickest ideas yet"

Ronald J. Palenski, Esq./ Sr. Vice President & General Counsel
Information Technology Association of America, ITAA (ADAPSO)

"Produces documents of excellent quality"

Robert E. Gregg, Esq., Partner/ Hazel & Thomas (Wash. DC)

"Our six copies give us efficient turnaround"

Alfred M. Wurglitz, Esq./ Vice President & General Counsel
Planning Research Corporation (PRC Inc.)

"Interesting, effective, well drafted, easy."

Charles D. Snowden, Director of Contracts
Computer Sciences Corporation (CSC)

"On its way to becoming a hit"

Washington Technology Magazine

Pays for itself in just 10 minutes!
Call Programmer's Paradise (800) 445-7899

Catalog V.7.3, Fall 1992
A Publication of Voyager Software Corp
1163 Shrewsbury Avenue
Shrewsbury, New Jersey 07702 USA
(908) 389-8950

Editorial Staff:

***Publisher,
Vice President-Marketing
Jeff Largiader***

***Marketing Production Supervisor
Jane Carling***

***Desktop Publishing Specialists
Margo Smith
Dana Warnock***

***Marketing Sales Supervisor
Doug Stevens***

***Marketing Sales Representatives
Dawn E. Hofer
Thomas Ryan***

***Graphic Designer
Lisa DiLillo***

***Illustrator
Greg Curry***

***Freelance Desktop
Publishing Specialist
Kelly Hines Keller***

© 1992 Voyager® Software Corp

Prices, terms, conditions and versions are subject to change without notice. Product and/or company names are generally trademarks or registered trademarks of their respective companies. We are not responsible for typographical errors.

The statements and/or opinions given by contributing authors to this publication are their own and are not necessarily representative of the opinions of our staff.

Programmer's Paradise®

A Division of Voyager® Software Corp
(800) 445-7899

International: (908) 389-9228

Customer Service: (908) 389-9229

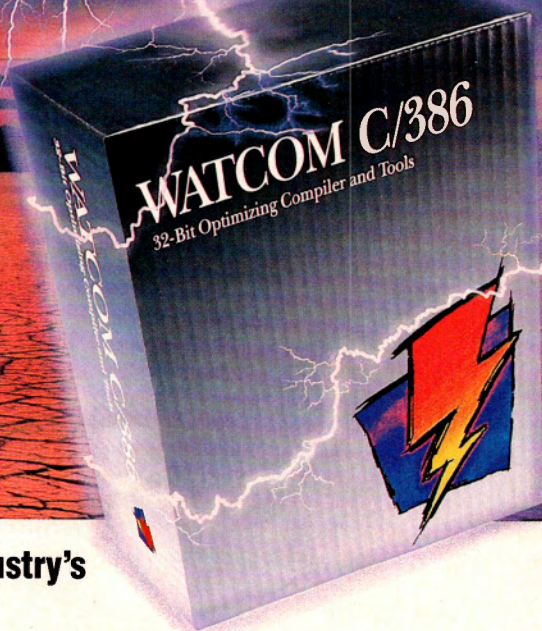
Corporate Accounts: (800) 422-6507

FAX: (908) 389-9227

Sales: (908) 389-8950

Delivering the Power: WATCOM C9.0/386

- ▶ **The Widest Range of 32-bit Intel x86 Platforms**
32-bit DOS, 32-bit Windows, OS/2 2.0, AutoCAD ADS
- ▶ **The Industry's Leading Code Optimizer**
Advanced global optimizer with new 486 optimizations
- ▶ **The Most Comprehensive Toolset**
Debugger, profiler, protected-mode compiler and linker, 32-bit DOS extender with royalty-free run-time, licensed components from Microsoft SDK, and more
- ▶ **The Best Value in 32-Bit Tools: \$895***



Unleash 32-bit Power!

WATCOM C9.0/386 lets you exploit the two key 32-bit performance benefits. The 32-bit flat memory model simplifies memory management and lets applications address beyond the 640K limit. Powerful 32-bit instruction processing delivers a significant speed advantage: typically at least a 2x speedup.

You Get:

- ▶ **100% ANSI and SAA compatible:** C9.0/386 passes all Plum Hall Validation Suite tests
- ▶ **Extensive Microsoft compatibility** simplifies porting of 16-bit code
- ▶ **Royalty-free run-time** for 32-bit DOS, Windows and OS/2 apps
- ▶ **Comprehensive toolset** includes debugger, linker, profiler and more
- ▶ **DOS extender support** for Rational, Phar Lap and Ergo
- ▶ **Run-time compatible with WATCOM FORTRAN 77/386**

32-bit DOS support includes the DOS/4GW 32-bit DOS extender by Rational Systems with royalty-free runtime license

- ▶ Virtual Memory support up to 32Mb

32-bit Windows support enables development and debugging of true 32-bit GUI applications and DLLs.

- ▶ Includes licensed Microsoft SDK components

32-bit OS/2 2.0 support includes development for multiple target environments including OS/2 2.0, 32-bit DOS and 32-bit Windows

- ▶ Access to full OS/2 2.0 API including Presentation Manager
- ▶ Integrated with IBM Workframe/2 Environment

AutoCAD ADS and ADI Development: Everything you need to develop and debug ADS and ADI applications for AutoCAD Release 11

Novell's Network C for NLM's SDK includes C/386

The Industry's Choice.

Autodesk, Robert Wenig, Manager, AutoCAD for Windows:

"At Autodesk, we're using WATCOM C/386 in the development of strategic new products since it gives us a competitive edge through early access to new technologies. We also highly recommend WATCOM C/386 to third party AutoCAD add-on (ADS and ADI) developers."

Fox Software, David Fulton, President: "FoxPro 2.0 itself is written in WATCOM C, and takes advantage of its many superior features. Optimizing for either speed or compactness is not uncommon, but to accomplish both was quite remarkable."

GO, Robert Carr, Vice President of Software: "After looking at the 32-bit Intel 80x86 tools available in the industry, WATCOM C was the best choice. Key factors in our decision were performance, functionality, reliability and technical support."

IBM, John Soyryng, Director of OS/2 Software Developer Programs: "IBM and WATCOM are working together closely to integrate these compilers with the OS/2 2.0 Programmer's Workbench."

Lotus, David Reed, Chief Scientist and Vice President, Pen-Based Applications: "In new product development we're working with WATCOM C because of superior code optimization, responsive support, and timely delivery of technologies important to us like p-code and support for GO Corp's. PenPoint."

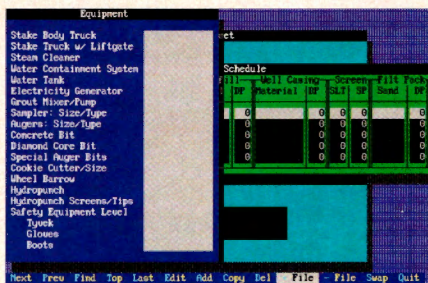
Novell, Nancy Woodward, V.P. and G.M., Development Products: "We searched the industry for the best 386 C compiler technology to incorporate with our developer toolkits. Our choice was WATCOM."

WATCOM

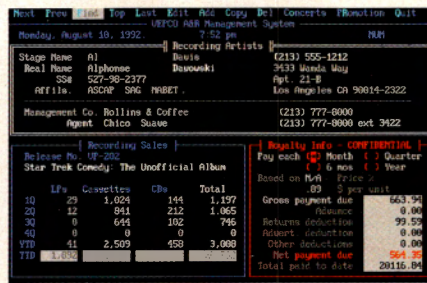
The Leader in 32-bit Development Tools

415 Phillip Street, Waterloo, Ontario, Canada. Telephone: (519) 886-3700, Fax: (519) 747-4971. *Price does not include freight and taxes where applicable. Authorized dealers may sell for less. WATCOM C and Lightning Device are trademarks of WATCOM Systems Inc. DOS/4G and DOS/16M are trademarks of Rational Systems Inc. Other trademarks are the properties of their respective owners. Copyright 1992 WATCOM Products Inc.





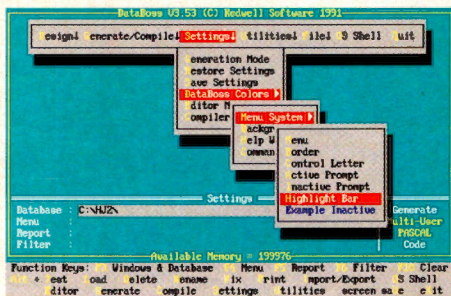
Need to schedule drilling rigs, supplies and crews to find environmental contamination? With DataBoss, you can. This 13-file, 14-screen system was built in 18 hours.



Want to make a slick-looking system to track recording artists, sales and royalty payments? With DataBoss, you can.



Can you customize how your applications work and look, like this wild game? With DataBoss, you can. Note the online help.



DataBoss was even used to build itself!

Want to build C or Pascal database applications in minutes? With DataBoss, you can.

Amazing product cuts your development time in half, builds relational database systems in Pascal or C

With DataBoss, you can build relational database applications *in minutes*.

For more complex applications, your time savings will be even more dramatic.

As one of our users reported last week, "I just finished a project with DataBoss in a day and a half. Before DataBoss, it would have taken me a month."

Developer Stephen Moore writes, "DataBoss has saved my company hundreds of hours of programming time and thousands of dollars."

Data Based Advisor magazine agrees: "Using DataBoss is a lot faster than writing applications from scratch, even with a good selection of libraries."

DataBoss builds systems for you

DataBoss generates *all parts* of your application, including: menus, files (with file linking), data entry screens, reports, reindexing, and reconfiguration modules.

Your applications look professional, with multi-window data entry, table entry, virtual or calculated fields, memo fields, scroll-

able fields, mouse support, context-sensitive help, and even an on-line manual.

Byte reports, "The applications generated are very sophisticated, with all the usual features, including full field editing, field default and validation checking, user-defined queries, automatic index maintenance, customization capabilities and user-defined error messages."

No extra language or macros to learn

DataBoss writes programs in *customizable Pascal or C*. Then with your compiler it creates executable applications.

You get customizable source code to the libraries and files that DataBoss uses to generate your programs. So you can change the libraries, or use your own.

If you're a veteran programmer or a novice, DataBoss lets you *choose* your level of involvement with source code. You're supported by DataBoss menus, on-line help, and our friendly support staff.

Maintenance tools for your applications

Your applications evolve with time. So DataBoss generates *systems documentation* for each part as you *build it*—database, entry screens, reports, menus. You have all the information when you need it.

If the structure of your database changes, DataBoss lets you update existing data without writing a single line of code.

With no runtime fees (and no annoying paperwork), make as many systems as you want. You don't owe us another cent.

Be an "Ace" network programmer

DataBoss lets you build both single-user and *networked* multi-user systems. Just choose "Multi-User" and DataBoss adds record locking and other network functions. It's as simple as that.

Use your favorite compiler

DataBoss C works with Turbo C/C++ 2.0 or higher, Borland C/C++ 2.0 or higher, Microsoft C/C++ 6.0 or higher, QuickC 2.5. DataBoss Pascal works with Turbo Pascal (5.5 or higher).

Order now. After all, "If you are a professional Pascal or C programmer, then DataBoss can save you unimaginable development time," says Alan Neibauer, author of *Mastering Q&A* and 22 other books.

Call today and give a big boost to your productivity.

Get DataBoss now!

Regularly \$695—call Programmer's Paradise today for a special low discount!

(800) 445-7899

Kedwell Software

7460 Redwood Boulevard
Novato, California 94945
Ph. (415) 899-8525 • Fax (415) 899-8524

Australia: Ph. 07-379-4551 • Fax 07-379-9422
©1992 Kedwell Software. All rights reserved. DataBoss and Kedwell are trademarks of Kedwell Software. Ad Code PP1

NEW!

DataBoss Xbase Engine

This add-on module lets DataBoss C users build C language database applications that are dBase compatible. It produces .DBF files, .NDX indexes. Regularly \$99; call Programmer's Paradise for an even lower price!

In Every Issue...

Industry Currents	
Highlights, recent releases and industry news	
	11-12
Q & A	
with Gordon Eubanks, President & CEO of Symantec	
	15-16
OS/2 Section	
	39-41
Categorical Price Guide	
	20-66
Order Form	
between pages 64 & 65	
Alphabetical Product Listing	
	171-175
Advertiser Index	
	176

Feature Articles

Why Develop on OS/2 2.0?	
by Brian Proffit, IBM	
	37-38
Porting DOS Applications to Windows	
by Neville Franks, Soft As It Gets	
	133
BRIEF 3.1 for DOS and OS/2	
by Deborah Herath, Borland International	
	29
OS/2 2.0: A Development Platform	
by Geno Coschi, WATCOM	
	44-45
Writing Cross-Platform Applications	
with New MS-VB for DOS	
by Steve Podradchik, Microsoft Corporation	
	134-6

LISTINGS & DESCRIPTIONS – BEST SELLERS!

DOS DEVELOPMENT SOFTWARE

Listings	Descriptions
386 Tools	20 75
ADA Language	20 76
Assembly Language	20 76-7
Bar Code Products	20 77
BASIC Language	20 78-80
C Language	20 80-91
C++ Language	24 93-86
Case Tools	24 96-98
COBOL Language	24 98
Database	27 99-109
Debuggers	32 110
Documentation	32 111-3
DOS Extenders	32 113
Editors	32 113-5
Embedded Systems	32 115
Expert Systems	32 116
Foreign Language Translators	32 116
Forms	32 118
FORTRAN Language	32 118
Graphics	34 119-22
Linkers & Librarians	34 122-4
LISP Language	34 122
Modula-2 Language	34 122
Pascal Language	34 122
Profilers	34 122
Prototyping	34 124-6
Reference Guides	34 126
REXX	34 126
Smalltalk Language	34 126
Sorting	34 126
Source Maintenance	34 126-7
Testing Tools	34 128
Training Materials	34 128
Translators	34 128-9
Additional Languages	34 128-9

OS/2 DEVELOPMENT SOFTWARE

Listings	Descriptions
Assembly Language	47 131
AWK Language	47 131
BASIC Language	47 131
C/C++ Languages	47 131
COBOL	47 131
Database	47 131
Debuggers	47 131
Documentation	47 131
Editors	47 131
FORTRAN Language	47 131
Linkers	47 131
Operating System Support	47 131
Prototyping	47 131
Smalltalk	47 131
Sorting	47 131
Source Management	47 131
Testing Tools	47 131
Additional Products	47 131

WINDOWS DEVELOPMENT SOFTWARE

Listings	Descriptions
BASIC Language	49 138-40
C Language	49 138-40
C++ Language	49 140-2
COBOL	49 140-2
Database	50 142-3
Debuggers	50 146
Documentation	50 144
Editors	50 146
FAX	50 146
Forms	50 148
FORTRAN Language	50 148
Graphics	50 148
GUI	50 148

Listings	Descriptions
Help Authoring Tools	50 150
Linkers	50 150
Multimedia	50 150
Pascal Language	52 150
Prototyping	52 150
Resource Tools	52 150
Smalltalk Language	52 150
Source Management	52 150
Testing Tools	52 150
Training	52 150-2
Additional Products	52 150-2

OPERATING SYSTEMS

Operating Sys. & Environments	52 155-8
-------------------------------------	----------------

APPLICATION SOFTWARE

DOS Applications Software	54-57 155-8
OS/2 Application Software	58 160-1
Windows Application Software	58 160-1

UTILITIES

DOS Utilities	60 162-70
OS/2 Utilities	63 162-70
Windows Utilities	63 162-70

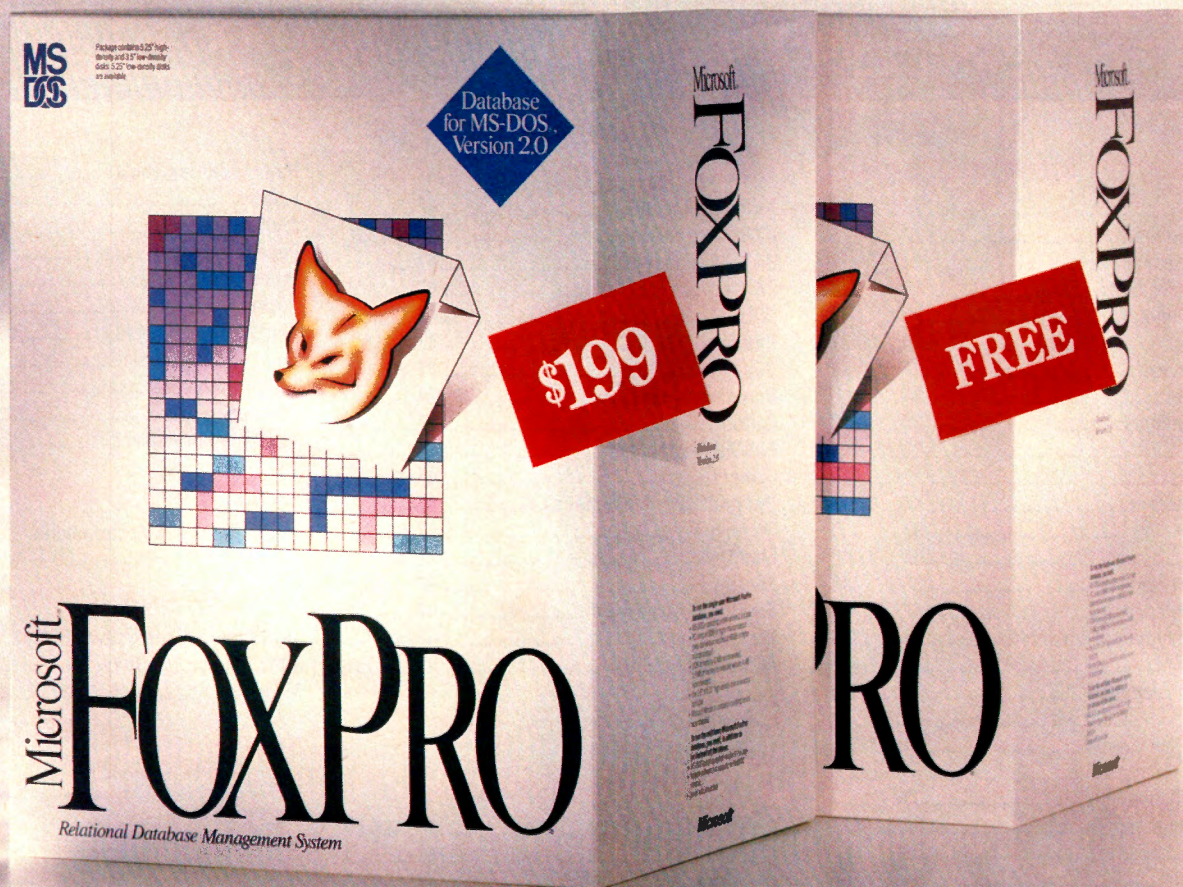
BOOKS

Programmer's Bookshelf	63 162-70
------------------------------	-----------------

UNIX DEVELOPMENT SOFTWARE

Languages	66 162-70
Database/File Management	66 162-70
Editors	66 162-70
Screens	66 162-70
Shells	66 162-70
Testing Tools	66 162-70
Additional Products	66 162-70

The world's fastest PC database comes with a commitment that will last forever.



And an offer that won't.

© 1992 Microsoft Corporation. All rights reserved. Printed in the USA. *Plus \$10.00 freight and applicable sales tax. Reseller prices may vary. **Free; you don't even pay freight. †dBASE IV Benchmarks performed by Micro Endeavors, Inc. DB2 Benchmarks performed by Patrick O'Neil, "The Set Query Benchmark," in "The Benchmark Handbook for Database and Transaction Processing Systems," Morgan Kaufman Publisher, 1991. You must currently be a licensed user of a database product to qualify for this special upgrade offer. To qualify for this offer at your reseller you must bring proof of purchase with you: 1) the original disk from your program, 2) title page of the manual, or 3) a copy of the sales receipt. You must register your copy of Microsoft FoxPro 2.0 to qualify for a free upgrade to version 2.5. (If you get your upgrade directly from Microsoft, you will be automatically registered.) You will then be notified when your free upgrade is available.

Trade up to FoxPro 2.0 from other database products for only \$199 and get a free 2.5 upgrade.

If you use dBASE®, Paradox®, Clipper™ or any other PC database, here's an offer you'll want to nab before it's gone forever: Microsoft® FoxPro® database version 2.0 for just \$199*, and a free** upgrade to version 2.5 for MS-DOS® or for Windows™ operating systems as soon as it's released.

It's our way of celebrating the Microsoft and Fox merger. And of introducing you to the fastest, most powerful X-BASE solution available. This is a solution that's sure to stay at the head of the database pack, with Microsoft's full commitment.

The fastest PC database.

FoxPro 2.0 gets unequalled results, thanks to superior technology. Our Rushmore™ Query Optimization lets you get the fastest speed of any PC-based database — up to 4 times faster than DB2® and 10 times faster than dBASE IV.*†

The most productive environment.

It's intuitive and graphical to make your life easier. With Relational Query-By-Example (RQBE) you can simplify complex tasks. And with our exclusive Graphical Browse, you can choose the way you view your data.

With the Screen Builder you can quickly design data-entry forms by simply dragging objects into place. And for really quick turnaround, try the Application Generator. It creates complete, fast applications for you — applications you can then customize to fit your needs.

Then there are the other powerful tools like Trace and Debug windows, Project Manager, Menu Builder, Report Writer and Label Writer. With all these tools, you'll write the most powerful, robust apps imaginable.

Is it any wonder that FoxPro 2.0 received the *Byte* Award of Excellence, *InfoWorld* Product of the Year, *PC Magazine's* Technical Excellence Award and *PC Magazine's* Editors' Choice Award, as well as the *Data Based Advisor* and *DBMS Readers* Choice awards?

Your investment is secure.

It's so easy to learn and use, you won't have to worry about losing any time getting up to speed.

You won't lose any of the work you've done, either. Microsoft FoxPro 2.0 is compatible with dBASE III PLUS® and extends dBASE IV. This means you can move your apps over right away. In fact, you'll find they work even faster in FoxPro.

If you're thinking about what'll happen to your applications tomorrow, relax. The applications you build today under Microsoft FoxPro 2.0 will run on Microsoft FoxPro version 2.5 for Windows, MS-DOS, Macintosh® and UNIX®.

Special offer for users of FoxPro.

We have especially good news if you're a registered FoxBASE+ for MS-DOS or FoxPro 1.x user. You can upgrade to version 2.0 for only \$175 with a free upgrade to version 2.5 when it is available.

The Microsoft commitment.

With Microsoft's resources and Fox's expertise, we're even better positioned to develop the best products and support in the industry. We've been meeting with Fox User Groups around the country. We're planning to hold the largest Fox Developers Conference ever in Phoenix this year. And we're keeping the dialog going on the popular CompuServe® forum, FOXFORUM.

Finally, we support the initiative to create an ANSI standard for the X-BASE language. We stand behind Microsoft FoxPro 2.0 with a full 90-day money-back guarantee and great product support.

But although our commitment is long-lived, this special offer is not. So get a move on and move up to Microsoft FoxPro 2.0, fast. Because when this offer is gone, it's gone forever.

Rush to your dealer. For the name of a dealer nearest you or to order by phone call now, toll-free:

(800) 228-7007, Ext. AC6

Microsoft®
Making it easier

Offer good only in the 50 United States. Offer expires December 31, 1992. Limit one copy of Microsoft FoxPro version 2.0 and one free upgrade to version 2.5 per product license. Please allow 2-4 weeks for delivery upon receipt of this order coupon by Microsoft. In the 50 United States, call (800) 228-7007, Ext. AC6. For information only: In Canada, call (800) 563-9048; outside the 50 United States and Canada, call (206) 936-8661. Microsoft, MS-DOS, FoxBASE + and FoxPro are registered trademarks and Windows is a trademark of Microsoft Corporation. Macintosh is a registered trademark of Apple Computer, Inc. dBASE, dBASE III PLUS, dBASE IV and Paradox are registered trademarks of Borland International, Inc. CompuServe is a registered trademark of CompuServe, Inc. DB2 is a registered trademark of International Business Machines Corporation. Clipper is a trademark of Nantucket Corporation. UNIX is a trademark of UNIX Systems Laboratories.

OFFERS! AUTUMN OUTSTANDING

FROM
*Programmer's
Paradise®*

BORLAND BRIEF for just \$95!

Add a terrific editing tool, Vsearch, just \$159!

BRIEF, the world's most popular editor, is now available from Borland, and Programmer's Paradise can sell it to you at its lowest price ever!

The Borland BRIEF editor speeds development with its C-like macro language and source level debugger, template editing, smart indenting, complete search/replace, total keyboard configurability, and more productivity-boosting features. Borland BRIEF works with virtually any compiler, and delivers maximum programming productivity and flexibility.

Buy BRIEF today for just \$95, that's over 60% off the regular list price!

And for just another \$60 pick up a tremendous add-in productivity tool, Vsearch.



Vsearch adds multi-file, multi-pattern search and replace. It supports a mouse, directory wildcarding, can be run in batch mode, and

can undo all changes. Vsearch increases your productivity by saving time and improving reliability when making repetitious file modifications.

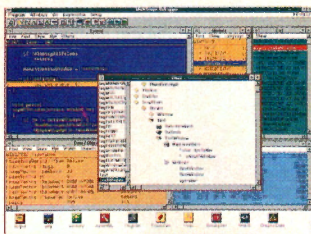
BRIEF:

List: \$249 Ours: \$185 \$95

BRIEF with Vsearch:

List: \$338 Ours: \$265 \$159

Multiscope for Windows by Symantec JUST \$99 with the purchase of either Borland C++ or Microsoft C/C++ 7.0.



Are you in need of a real C++ debugger for Borland C++ or Microsoft C/C++ 7.0? The MultiScope Debugger for Windows 2.0 provides all the debugging

power you need to solve your industrial strength C++ debugging problems in a Windows-hosted environment. Major C++ features include: an integrated C++ class hierarchy browser, C++ object browsing and complete C++ expression evaluation. Additional features include: the CommandBar™ to provide quick access to debugging commands, superior message spying, 386/486 watchpoints, and the Crash Analyzer System for finding the cause of (U)AEs after-the-fact.

Multiscope for Windows:

List: \$369 Ours: \$255 Sale: \$99*

*with the purchase of Borland C++, Borland C++ & Application Frameworks, or Microsoft C/C++

OS/2 2.0 & ResourceSHIELD

The Stirling Group's ResourceSHIELD is an invaluable tool for designing, creating, editing, translating, compiling and managing GUI resources under OS/2 2.0.



There's nothing else like it available! It's an efficient and visual one stop shop for all your OS/2 Presentation Manager resource needs. A visual integrated development environment makes it easy to organize resource components of applications by organizing them into projects. Seven powerful resource editors provide the ability to edit source in binary or text resource files. Translate resources between any supported platform. Over 100 ready to use, professionally designed resource templates for dialog boxes, menus, icons and accelerators are included royalty free!

Buy ResourceSHIELD, together with OS/2 2.0 and save!

OS/2 2.0:

List: \$195 Ours: \$149

ResourceSHIELD:

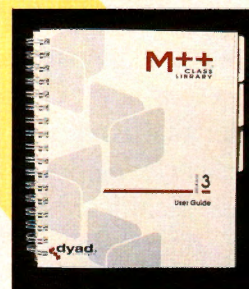
List: \$295 Ours: \$265

OS/2 2.0 and ResourceSHIELD:

List: \$490 Ours: \$404- \$369! save!

M++ & Borland C++

M++ Version 4.0 is a complete math library for C++. Unlike competing products M++ includes both EISPACK and LINPACK code in a multi-dimensional library with full outer operations. The library comes complete with FFT and convolution functions, huge pointers for large arrays, and improved performance from assembly language inner loops.



Special offer!

M++ & Borland C++ 3.1:

List: \$790 Sale: \$549

M++ & Borland C++ 3.1 with Application Frameworks:

List: \$1044 Sale: \$749

Tools.h++ & Borland C++

Tools.h++, Rogue Wave's best-selling class library now has templates. With over 30 well-written template based classes, plus over 60 other classes, Tools.h++ has the tool for every conceivable need. Features include: a Regular Expression class for pattern matching; a Tokenizer class to break strings up into separate tokens; Smalltalk-like collection classes, B-tree class; source code and more! Bundled with Borland

C++, you have everything you need to build the fastest applications for C++.

Special Bundle Offer!

Tools.h++ & Borland C++:

List: \$794 NOW: \$449

Tools.h++ and Borland C++ & Application Frameworks:

List: \$1048 NOW: \$649

ED, the Programmer's Editor for Windows, by Lifeboat Software

At last! A full-featured Windows-based programmer's editor is here! ED is setting the standard with features like background compilation, automatic code indenting and completion, hypertext function/procedure lookups, "smart" language-specific editing, a fast "C" extension language, Windows Toolbar, unlimited undo and redo, keyboard macros and remapping, and emulation of popular DOS editors (BRIEF, Wordstar, Qedit, Norton). Order today and discover the Windows editing tool for the 90's.



Special limited time offer!

Order ED with Microsoft C/C++ and save!

List: \$748 Ours: \$489

FoxPro and Espia

Turn FoxPro into a graphical Database Management System. View your FoxPro data graphically without ever leaving FoxPro. Espia from Devices, Inc. is seamlessly integrated with FoxPro's Screen Builder, Report Writer and RQBE. Espia allows creation of custom 2D and 3D graphs for screen display and printing. Images can be stored in memofields and displayed in a FoxPro Window or printed at any size and position. Use Espia's E-wins to display graphs and images in the output from your query to be plotted in an overlapping E-win. Buy Espia with FoxPro and get a terrific price!

Special offer!

Espia:

List: \$295

Ours: \$265

Sale: \$99*

(*with the purchase of FoxPro)

Espia LAN:

List: \$395

Ours: \$355

Sale: \$149*

(*with the purchase of FoxPro 6-pack)



OS/2 2.0 & Brian Proffit's Book OS/2 Application Development Tools

Are you ready to give OS/2 2.0 a try as a development platform. Take this opportunity to pick up a valuable resource book. OS/2 2.0 Application Development Tools provides detailed information on hundreds of development tools currently available for OS/2. IBM Tools expert, Brian Proffit, details what to use, when and why from his own experience. Read the book and give Programmer's Paradise a call to discuss the tools you need. There's information on hundreds of tools. A must for the serious developer!



Just \$19*

(*with the purchase of OS/2 2.0 or any OS/2 development tool.)

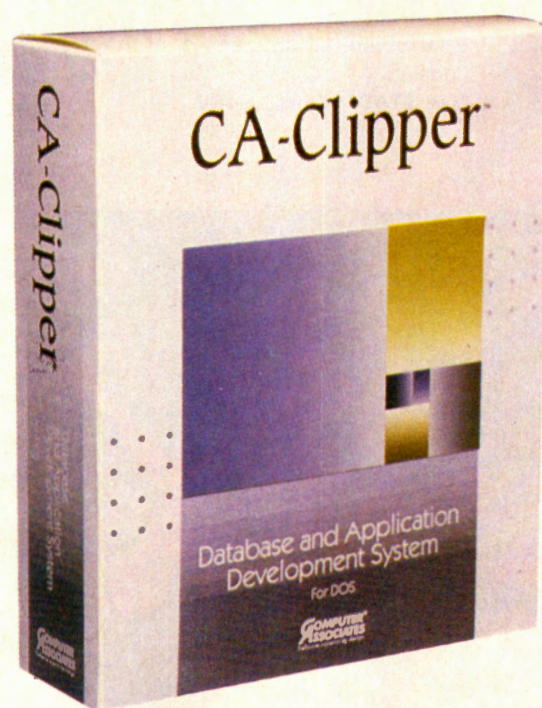
All products are trademarks or registered trademarks of their respective companies. Prices are subject to change without notice.



To order call:

800-445-7899

The Premier Application Development System For PCs.



CA-Clipper offers simplicity and flexibility, without sacrificing the control and productivity professionals demand. Its rich language is easy to learn, yet comprehensive. CA-Clipper encourages disciplined, structured programming—a requirement for today's large-scale applications and

multiprogrammer projects. It has everything you need to build sophisticated business applications featuring high reliability and easy maintainability.

**COMPUTER
ASSOCIATES**
Software superior by design.

Call Programmer's Paradise® to order today!

800-445-7899

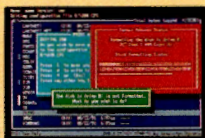
Industry Currents



INSTALL Update...

Knowledge Dynamics Corp.
Canyon Lake, TX

Knowledge Dynamics Corp. is now shipping a major update to their award-winning INSTALL program. Version 3.2 features 40% better data compression than prior versions and an optional Pop-Up Hypertext Help TSR (compatible with Norton Guides). Additionally, enhancements to the script language allow simulation of target environments, assignment statements, string-manipulation, rebooting, and more.



OPTLINK 3.0 for Windows

SLR Systems
Butler, PA

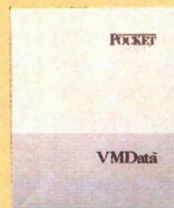
OPTLINK 3.0 for Windows adds true smart-linking and p-code support for C/C++ 7.0. The World's Fastest Windows linker, OPTLINK is a drop-in replacement for LINK. Supports all compilers and assemblers that generate standard .OBJ files. Slash your link time and eliminate the need to run RC besides! No limits on application size or complexity. Supports CodeView 3.x and 4.x. Generates 16-bit .EXEs and .DLLs for both Windows and OS/2.



Announcing VMData!

Pocket Soft, Houston, TX

VMData provides a uniform, cross-platform method of managing a program's dynamically-allocated data. Saves Windows developers from designing complex data-management routines. Allows porting applications from one operating system to another. Provides a platform-independent virtual-memory scheme for managing dynamically allocated data. VMData efficiently manages the operating-system interface, manipulating the data between all of the memory resources available to the platform.



QuickForm Contracts!

Invisible Hand Software
Annandale, VA

QuickForm Contracts is an expert system for your PC that automates the drafting of nine categories of contracts most often needed by software developers and consultants. Prompts you with multiple choice questions, then automatically assembles a "near custom" agreement weighted to your side of the transaction. Produces millions of variations of documents. Port any document to your word processor for fine tuning by counsel. Saves time, money and let's you hit the table first with a document weighted in your favor. See QuickForm Contracts advertisement on page 2.



Virtual Windowing and Display Power!

TeraTech, Rockville, MD

TeraTech delivers virtual windowing and display power! Written in assembly, *Virt-Win* lets you write complex displays to memory and snap them on in an eye blink. Take partial screen snapshots and cut and paste screen segments. *Virt-Win* supports Herc, CGA, EGA, VGA and SVGA. Windowing system allows an unlimited number of overlapping windows that can move, resize, shadow, and explode! Contents may be bigger than physical window and can be panned and zoom at will.



NEW From Microsoft!

Microsoft Corporation
Redmond, WA

If you've ever used Visual Basic for Windows, you know how easy it can be to create full-featured applications for the Windows operating system. Wouldn't it be great if you could have the same freedom and productivity when you develop for MS-DOS? Now you can. Microsoft Corporation recently released Microsoft Visual Basic for MS-DOS. Combining fast, visual design tools with efficient, event-driven code, Microsoft Visual Basic for MS-DOS gives you the benefits of advanced programming without the time investment of learning it.



Test Your Resources

The Stirling Group, Schaumburg, IL
ResourceSHIELD

is a visual development tool that integrates the entire process of designing, creating, editing, translating, compiling and managing resources for applications running under MS Windows, OS/2, and Windows NT. Use to visually create and interactively test resources such as dialog boxes, bitmaps, cursors, icons, accelerators and menus quickly and easily. Eliminates the time consuming edit-compile-link development cycle. Customize aspects of graphical application's look and feel, translate applications into foreign languages without having access to the application's source code. Directly modify .EXE files without having access to the source code.

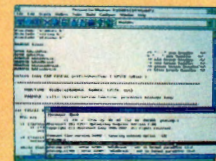


Industry Currents

InnoVision Introduces Persona

InnoVision Software, Inc., Pittsburgh, PA

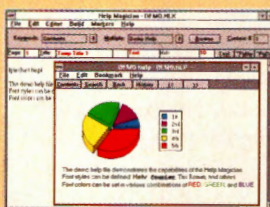
InnoVision Software introduces *Persona for Windows*, an Integrated Development Environment that runs under MS Windows. Persona's fast, full-featured programmer's editor provides both CUA and BRIEF emulations. The IDE provides compile, test and debug facilities, project configuration, function TAGS and a host of other features. Persona is full featured enough to make you leave your favorite DOS editor, and simple enough to install and configure that you will be up and running within 5 minutes.



Windows Help Files - So Easy, It's Magic!

Software Interphase, Inc., Foster, RI

The Windows Help Magician is an integrated help development system that simplifies the creation of help files for MS Windows. Allows help developers to create, edit, import, and test the functionality of help files within a single, integrated environment. Create jumps and pop-ups by simply marking words or phrases within the help text. Include bitmaps and all forms of hot spots. Create and dynamically order single or multiple Browse sequences. Also allows the importing of ASCII text and RTF files written with MS Word for Windows. Manuals created with Word can be imported into the Help Magician and turned into on-line help. The built-in editor includes all the popular editor functions such as copy, find, cut, and paste. Help files can be tested immediately. And once the help file is created, the Help Magician quickly writes the RTF file and runs the Help Compiler. Supports all Windows languages and is a must for anyone writing Windows help files.

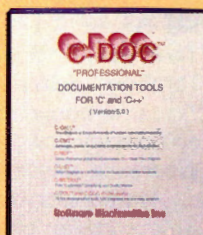


In every issue
look for **Industry Currents** — the
latest
developments
in the
software
industry!

Automated Documentation Made Easy!

Software Blacksmiths Inc., Toronto, ON

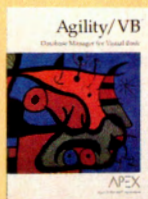
V5.0 of the C-DOC documentation tools for 'C' and 'C++' now have an easy to use "point-and-click" Graphical User Interface. This makes it even easier to generate accurate and up-to-date documentation fast and automatically. All it takes is a mouse click to generate caller/called function hierarchy tree-diagrams, identifier cross-references, documentation and complexity metrics, annotated action-diagram listings, and more. Reformat source code to user selectable standardized formats, including the automatic generation and insertion of comment blocks for each function!



Improve Your Ability With Agility/VB

Apex Software Corporation, Pittsburgh, PA

Agility/VB provides the combination Visual Basic programmers have been looking for—a powerful set of function calls for programming control over database operations and grid, text, button and picture custom controls for programming ease. Includes the View Editor, a graphical tool to define complex database relationships. Supports dBASE file formats as well as a native format for variable-length data.



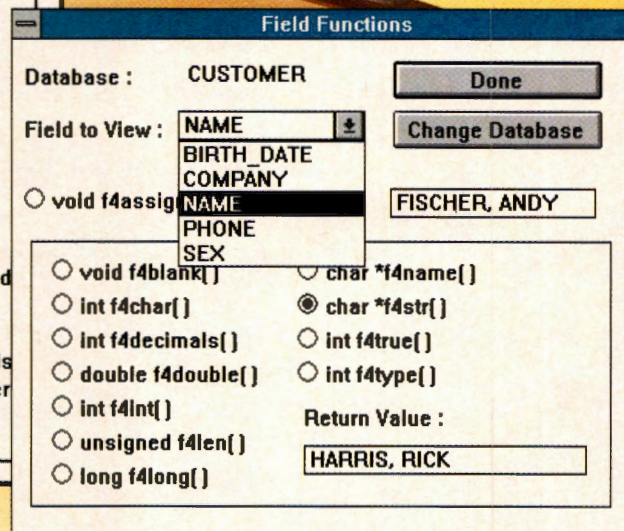
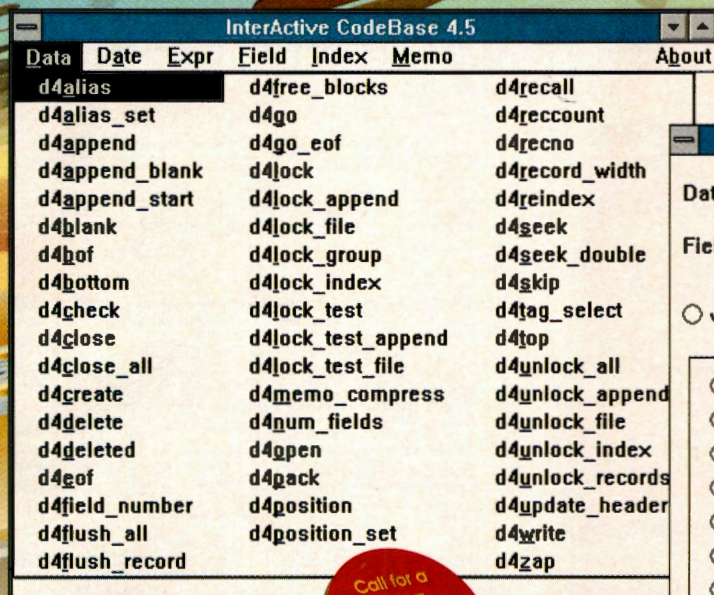
Add the Impact of
Multimedia With
One DLL Call!

**Lenel Systems
Rochester, NY**

MediaDeveloper is a multimedia Windows application development tool that makes it easy to integrate multimedia into applications to stimulate user interest and retention. Compatible with any development environment that supports DLL calls. It includes all multimedia management functions: media and device control for multimedia peripherals; and support of major industry-standard animation, audio, video and graphics. Also includes a comprehensive multimedia database. Fully supports Windows 3.1 functions including OLE!



dBASE, FoxPro and Clipper in C, C++ and Basic



- Multi-user
- DOS, Unix, OS/2 Support
- C++ Interface Included
- Windows 3 Data Entry
- Clipper → C Translator Available

Complete DBMS for C, C++ and VB programmers - compatible with the data, index and memo files of dBASE III/IV, FoxPro 2 and Clipper. Try the super-fast, super-small FoxPro 2.0 CDX index files!



(Using Visual Basic? Try CodeBasic!)



CodeBase 4.5

The C Library for DataBase Management

**SEQUITER
SOFTWARE INC.**



TEL. 403•437•2410
FAX 403•436•2999
Europe 33.20.24.20.14

#209,9644-54 AVE., EDMONTON, AB, CANADA T6E-5V1

(ZINC)

BEFORE YOU

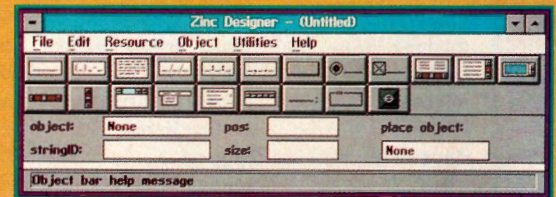
LINK

THINK ABOUT IT.

The most important stage of your development cycle comes before you write a single line of code. You can't meet your objectives if the architecture of your development tools fits like a straitjacket. Zinc Interface Library 3.0 gives you programming freedom by supporting Windows, DOS Graphics and DOS Text more completely, and with more power than any other C++ program tool. And Zinc does it with only one set of source code. That's over 85% of the PC market. But it's only a beginning. Zinc's flexible, single source solution will soon support OS/2, UNIX and the Macintosh. All without sacrificing functionality. If you want C++ Programming that won't put you in a bind, call today for a free Zinc technical information packet and demo disk. 1.800.638.8665.



[MS WINDOWS]



[DOS GRAPHICS]



[DOS TEXT]

FEATURE	ZINC INTERFACE LIBRARY 3.0	MICROSOFT FOUNDATION CLASSES	BORLAND APPLICATION FRAMEWORKS	
			TURBO VISION	OBJECT WINDOWS
WINDOWS 3.X	■	■		■
DOS GRAPHICS	■			
DOS TEXT	■		■	
SINGLE-SOURCE SUPPORT FOR WINDOWS 3.X, DOS GRAPHICS AND DOS TEXT	■			
FULL ACCESS TO WINDOWS API	■	■		■
MULTIPLE COMPILER SUPPORT (ZINC SUPPORTS BORLAND, MICROSOFT AND ZORTECH C++ IN ONE BOX)	■			
INTEGRATED DESIGN TOOL	■	□		□
WINDOWS (PARENT, CHILD, MDI), MENUS (PULL-DOWN, POP-UP, HIERARCHICAL), BUTTONS (REGULAR, BITMAP, RADIO BUTTON, CHECK BOX), GROUP BOXES, COMBO BOXES, HORIZONTAL AND VERTICAL SCROLL BARS, VERTICAL SCROLLING LISTS, STRING INPUT FIELDS	■	■	■	■
DATE, TIME, NUMBER AND FORMATTED STRING INPUT FIELDS, HORIZONTAL SCROLLING LIST BOXES, TOOL BARS	■			
LIST BOXES, COMBO BOXES AND TOOL BARS THAT CONTAIN ICONS, BUTTONS, RADIO BUTTONS, CHECK BOXES AND INPUT FIELDS (E.G. STRING, DATE, TIME)	■			
BUILT IN DATA VALIDATION	■			
NO EXTENSIONS TO C++ LANGUAGE REQUIRED	■	■	■	

□ RESOURCE TOOLS ARE INCLUDED, BUT DO NOT PROVIDE DIRECT INTEGRATION OF USER PROCEDURES AND VALIDATION ROUTINES OR DIRECT ACCESS TO LIBRARY OPTIONS.

Z

i

n

c

Q & A

with

Gordon Eubanks is the President and CEO of Symantec Corporation and is Chairman of the Board of Directors.

Gordon

Previously, Mr. Eubanks was vice president of Digital Research Inc.'s commercial systems division, where he was responsible for the development and marketing of all system software products. He left Digital Research in September 1983. Mr. Eubanks founded Compiler Systems, Inc. and authored its products: CBASIC, one of the first successful languages on personal computers, and CB80, a compiled version of CBASIC. Compiler Systems was acquired by Digital Research in August 1981.

Eubanks

Mr. Eubanks received his bachelor of science degree in Electrical Engineering from Oklahoma State University. He received his Master's degree in Computer Science from Naval Postgraduate School in Monterey, California. Mr. Eubanks was a commissioned officer in the U.S. Navy serving in the Nuclear Submarine Force from 1970 to 1979. He is a member of the IEEE and ACM and is an elected member and chairman of the board of directors for the Software Publishers Association.



Q Symantec has grown rapidly in the last few years, largely due to successful acquisitions. Merging together many different companies to form a more unified, focused corporation would seem to be a daunting task. Yet Symantec seems to have mastered the process. What does it take to work?

A The process of completing mergers and acquisitions certainly presents us with a unique set of challenges. In order to smoothly integrate an acquired company into Symantec, several components must fall into place. To insure a smooth transition, we must effectively communicate our strategies and expectations while taking the time to understand the values and concerns of the acquired company. We must also ensure

a smooth integration of our operations which involves the expertise and coordination of many areas in the companies. An essential element in this process is a well-prepared announcement which minimizes uncertainty among our customers and employees and maximizes the messages we want to convey about the acquisition. Mergers and acquisitions provide an excellent platform for us to provide a broad line of leading products to customers.

Q Symantec has been increasingly active in the development tools market beginning with the acquisition of Zortech last year, and the recent acquisitions of the Whitewater group and Multiscope. Will Symantec be pursuing more acquisitions in this segment of the market?

A Symantec is planning to grow dramatically in the development tools area. We are now the leaders in the Macintosh market with Think C and Pascal, our innovative incremental development environments. With our acquisition of Zortech, announced in July 1991, we now also offer the best 32-bit C++ compiler technology on all major desktop platforms -- DOS, Windows, OS/2, Windows NT, UNIX, and Macintosh. Multiscope enhances this cross platform offering by providing the industry's most powerful Windows-hosted debuggers. The Whitewater group, well-known for their object-oriented environment, Actor, will be the cornerstone for leading edge tools in the future. In addition, we have recently announced an agreement with

Gordon Eubanks

Apple, to jointly develop a cross-platform technology called Bedrock framework. This framework is based on work done at Symantec over the last three years. This object-oriented framework is designed to allow commercial and corporate developers to produce applications for multiple platforms more quickly and reliably. Our first implementation will target Windows and Macintosh; we plan to support all major desktop platforms in the near future.

You can now see our development tools strategy unfolding—to provide industrial strength developer tools for all major desktop platforms, allowing programmers to develop applications quickly with the highest quality.

Q Tell us about your current plans for the products from the Whitewater Group and Multiscope?

A We will continue to support all products from Multiscope and Whitewater and will be announcing new products from both groups in the near future. In August, we announced a major update to the Multiscope debuggers for DOS and Windows. Multiscope debuggers allow you to debug your application in the way which is most convenient to you, using a Windows-hosted debugger within Windows, via a remote network or serial line, from a post-crash viewpoint, and more. This new version of the debugger includes new C and C++ debugging support, a CodeView compatible command-line option, and advanced data browsing. Multiscope debuggers are now available for Microsoft C6, Microsoft C7, and for the first time, Borland applications. (Refer to the page 146 for product descriptions.)

Q There has been a plethora of recent acquisitions by companies other than Symantec in both the development tools and database categories of software. Do you expect increased consolidation? Is this good or bad news for customers?

A From recent indications, consolidation does seem to be on the upswing. This is good news for customers since teaming up with other companies helps us offer them even more value. Despite increased consolidation in the industry, there continues to be emerging opportunity for new companies in the markets and technologies.

Q Symantec has typically followed a strategy of acquiring products in high growth categories where the acquired product has the potential to dominate that category. If Zortech is to follow suit, there is much to overcome. Borland is deeply entrenched in the C++ Compiler market. The more recent competitor, Microsoft, has a tremendous C registered user base from which to upgrade. Watcom and IBM will soon join the competition. What are Symantec's motivations behind this acquisition?

A C++ is emerging as a language of the 90's. There is also a strong demand for development tools which can be used to develop applications for many different desktop platforms and in multiple spoken languages. Symantec's strategy directly addresses these needs—with tools such as Zortech C++ and the Bedrock Framework which allow developers to produce applications targeted to many platforms. Zortech C++ is already way ahead of our



*Gordon Eubanks President & CEO
Symantec Corporation*

major competitors with a 32-bit compiler for DOS/Windows and the first production quality C++ compilers for OS/2 2.0 and Windows NT. Whether you are developing for a single platform or for many platforms, Symantec offers tools which meet the needs of professional developers.

Q Elaborate on why every software developer should own a copy of Norton Desktop for DOS and or/Windows?

A Developers are always looking for ways to save time, money, energy and data. The automation and customization capabilities in the Norton Desktop for Windows and the Norton Desktop for DOS allow developers to work faster, smarter and with better results. With antivirus and back-up tools included in the package, these products are valuable productivity tools for developers. ♦

Questions were submitted to Gordon Eubanks by Jeff Largiadier, Vice President of Marketing at Programmer's Paradise.

All products are trademarks or registered trademarks of their respective companies.

PICK UP THE PACE

Now have up to 5 Mb of code, 128 Mb of data in DOS.
Faster-running EXEs on 8088, 8086, 286, 386 and above.
All this with no royalties or other run-time charges!

.RTLink[®]Plus: World class linking technology

End MS-DOS memory problems with .RTLink^{Plus}, the most advanced memory-management system available. Just compare its features with the linker you're currently using. No other linker matches its functionality for advanced software developers. With .RTLink^{Plus} you can:

- Reduce a program's RAM and disk space requirements.
- Use four types of memory management: standard and advanced overlays, automatic and programmer-controlled virtual memory.
- Overlay static data as well as code, with the most advanced data-handling options available.
- Overlay third-party and C-language libraries.
- Handle *any* programming construct, no matter how complex, *without* source code changes.

We've engineered every feature of .RTLink^{Plus} to help you optimize memory management in the applications you create. It's no wonder over 200,000 programmers worldwide use our linking technology.

NEW VMDData[™]: Virtually unlimited data

Efficient access to up to 128 Mb of dynamic data is at last now possible with the VMDData library of functions. C and Fortran programmers can create expandable VMDDataSets of data: linked lists, records, arrays, binary or any other type of data. Fixed-size virtual pages swap dynamic data in and out of memory, completely eliminating fragmentation problems and reducing the addressable memory requirements for keeping track of data location.

Perform specialized data operations: indexing, record sorting, hashing, sequential data access, AVL trees, and more.

**POCKET
SOFT[™]**
No Limits

Call today
to order or request
more information!

.RTLink^{Plus} and VMDData support

Microsoft[®] C 5.1, 6.0, 7.0;

Borland[®] C++ 3.0, 3.1;

Microsoft[®] Fortran 5.0, 5.1.

Full Code View[®] and

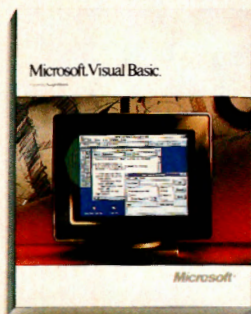
Turbo Debugger[®] Support.

Technical support at no
additional cost.

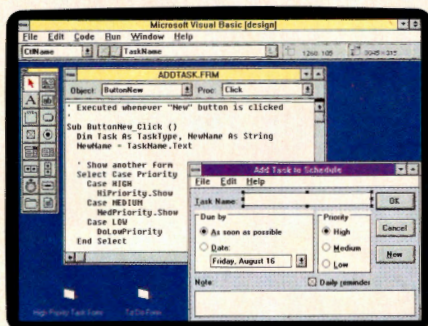
1-800-826-8086

PO Box 821049 Houston, TX 77282 Phone (713) 460-5600 Fax (713) 460-2651

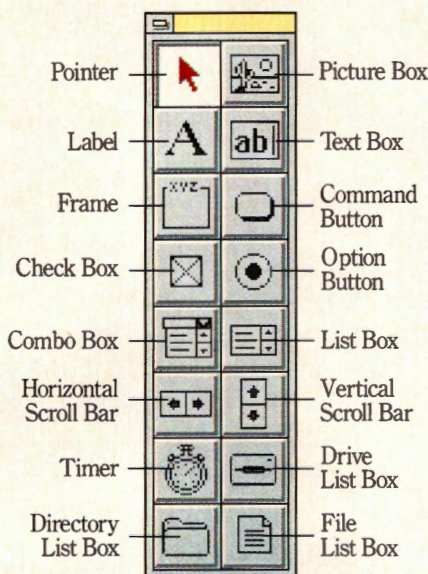
*.RTLink[®] is a registered trademark of Pocket Soft, Inc. "Pocket Soft" and "VMDData" are trademarks of Pocket Soft, Inc. All other trademarks are property of respective owners.



MICROSOFT
SOFTWARE
DEVELOPMENT
TOOLS



Graphical forms and a robust programming language combine to create powerful Windows-based applications.



Visual design tools provide a graphical way to create graphical applications.

If you still think powerful Windows applications take too long to develop, you haven't gotten the picture.

Maybe you should look into the Microsoft® Visual Basic® Programming System. It's fast from start to finish.

To begin, just click and drag its design tools. You'll be able to create professional Windows® interfaces, complete with icons, pull-down menus, and all standard Windows controls. And you can do it without writing a single line of code.

Visual Basic saves you another big step by automatically recognizing events (like a mouse being clicked or a key being pressed), then calling the appropriate code.

What's more, its debugger lets you stop your program, make a change, then continue without recompiling.

And Visual Basic's compiler is the industry's fastest.

In short, you get a robust, general-purpose programming system that goes from blank screen to .EXE file in a flash.

So call us at (800) 541-1261, Dept. X89. If you want to develop Windows apps quickly, Visual Basic is picture perfect.

© 1992 Microsoft Corporation. All rights reserved. Printed in the U.S.A. For more information inside the 50 United States, call (800) 541-1261, Dept. X89; outside the U.S. and Canada, call (206) 936-8661. Customers in Canada, call (800) 563-9048. Microsoft is a registered trademark and Visual Basic and Windows are trademarks of Microsoft Corporation.

PROGRAMMER'S TIPS

Key Features

- A general-purpose programming language includes all structured programming constructs.
- Visual design tools for creating the user interface of an application, with all standard Windows controls.
- Tightly-integrated, Windows-hosted development environment uses an event-driven programming engine to automatically recognize events and call the appropriate procedure.
- Compilation speed of up to 1,000,000 lines per minute.
- Integrated source-level debugger lets you inter-
- actively debug a program in its running state.
- High-level access to Windows systems capabilities including drag-and-drop, dynamic data exchange (DDE), and clipboard support.
- Extensibility via dynamic link libraries (DLLs), including direct calls to the Windows API. Extend the development environment by adding custom controls.
- Detailed online Tutorial and context-sensitive Help for the language, environment, and error messages.
- Create .EXE files with no royalty or runtime fee.

- To draw multiple controls of the same type without re-selecting the tool, hold down the <Ctrl> key while selecting the control in the Toolbox.
- When editing code, click on a procedure call and press <Shift> + <F2> to go directly to the definition of the selected procedure.

Microsoft
Making it easier

Visual Basic™ Bundles

Visual Basic for MS-DOS

Microsoft Corporation

Visual Basic for MS-DOS, standard edition, gives you the benefits of advanced programming without the time investment of learning it. You can create exciting visual interfaces without leaving MS-DOS. Work with controls that have built-in processing power—scroll bars that already know how to scroll and push-buttons that already know how to push. It's a part-time programmer's dream come true!

List: \$199 Ours: \$137

Competitive Upgrade: List: \$ 99 Ours: \$ 95

Professional Edition

Create full-featured applications for MS-DOS visually with Microsoft Visual Basic for MS-DOS Professional Edition. You now have the freedom to develop for either MS-DOS or Windows with access to databases as large as 128 MB. It has all the productivity of MS VB for MS-DOS Standard Edition, plus an optimizing compiler for today's advanced processors. Now you can develop a powerful multiple-platform solution in record time!

List: \$495 Ours: \$337

Competitive Upgrade: List: \$199 Ours: \$189

ProBas 5.5

TeraTech

ProBas has 938 routines to make your programs faster and more professional. Includes routines for: Virtual screens, a complete GUI, file compression, extended/EMS support, improved file I/O, mouse, windowing, sorts, string and numeric, hundreds more... 1200 pages of documentation. No royalties. Requires QuickBasic, Basic PDS 7, or VB for DOS. Hard disk required. 3-5 MBS.

List: \$195 Ours: \$169

w/MS VB/DOS: **\$394**
Special Bundle Offer: **\$289**

w/MS VB/DOS Prof. Edition: **\$690**
Special Bundle Offer: **\$479**

w/MS VB/DOS Comp. Upgrade: **\$294**
Special Bundle Offer: **\$249**

w/Prof. Edition Comp. Upgrade: **\$394**
Special Bundle Offer: **\$359**

See advertisement on page 78.

MicroHelp Texel™

MicroHelp

Are you tired of the 90° angle box-drawing characters? Would you like to have push-buttons with rounded corners? How about a mouse cursor that moves on a pixel-by-pixel basis and looks like an arrow or hourglass instead of simply an inverse character? Tired of "plain Jane" text screens? Then join the switch to Texel and watch your users' eyes pop out! Includes a font editor and a memory resident font capture program. All routines hand crafted in assembly language for the fastest possible operation and the smallest possible size. Compatible with Microsoft QuickBasic 4.5, BASIC PDS 7.x and MS VB for DOS.

List: \$99 Ours: \$89

w/MS VB/DOS: **\$298**
Special Bundle Offer: **\$209**

w/MS VB/DOS Prof. Edition: **\$594**
Special Bundle Offer: **\$399**

w/MS VB/DOS Comp. Upgrade: **\$198**
Special Bundle Offer: **\$179**

w/Prof. Edition Comp. Upgrade: **\$298**
Special Bundle Offer: **\$279**

MediaDeveloper

Lenel Systems International

Multimedia Application Development Tools to integrate multimedia into applications created with any development environment that supports DLL calls. Includes all multi-media management functions: media and device control for multimedia peripherals including analog devices; supports major animation, audio, video, graphics and documents file and media formats; provides comprehensive multimedia database.

List: \$595 Ours: \$529
See ad on page 49.

w/MS Visual Basic: **\$794**
Special Bundle Offer: **\$619**

w/MS VB w/Pro Toolkit: **\$1090**
Special Bundle Offer: **\$799**

Microsoft Visual Basic

Microsoft Corporation

Create Windows applications quickly and easily with graphical user interface design tools that make creating the user interface as easy as clicking on an object in the toolbox and placing and sizing it in a window. Provides a powerful development environment including incremental compilation, automatic syntax checking and integrated debugging.

List: \$199 Ours: \$139

MS VB w/Professional Toolkit

Picking up where MS Visual Basic leaves off, MS Visual Basic with Professional Toolkit adds programming tools and more than 20 powerful controls, resulting in a sophisticated system that gives professional developers quick access to these advanced features: charting, multiple document interfaces (MDI), object linking and embedding (OLE), tables, pen and multimedia capabilities.

List: \$495 Ours: \$337

RoboHELP™

Blue Sky Software

RoboHELP™ is an automatic authoring tool that makes the process of creating a Windows Help System just a matter of pointing and clicking. Guides the user through all the necessary steps—the user just fills in the actual help text when prompted. RoboHELP features a customizable visual tool palette. It is no longer necessary to be a programmer to create a Windows Help System. Generates source code for context-sensitive help, hypertext links, cross-references, etc. generates RTF, HPJ, & H files and links and compiles the Help file. Highly recommended!

List: \$495 Ours: \$446

w/MS Visual Basic: **\$694**
Special Bundle Offer: **\$549**

w/MS VB w/Pro Toolkit: **\$990**
Special Bundle Offer: **\$749**

Agility/VB

Apex Software Corporation

Now you can create applications in minutes—without writing a single line of code. Custom and picture controls enable you to build data entry forms, query-by-example interfaces, and report forms quickly and easily. Agility/VB also provides a complete set of function calls for database access and management. Support is included for dBASE, delimited text, and variable-length file formats. Use Agility's graphical View Editor to relate databases. Royalty-free!

List: \$189 Ours: \$89

See ad on page 137.
Offer expires October 31, 1992.

w/MS Visual Basic: **\$388**
Special Bundle Offer: **\$219**

w/MS VB w/Pro Toolkit: **\$684**
Special Bundle Offer: **\$409**

DOS DEVELOPMENT SOFTWARE

386 /486 DEVELOPMENT TOOLS

LANGUAGES

LIST OURS

C-terp 386 by Gimpel	398	319
FTN77/386 by Eurosoft	1350	1215
FTN77/486 by Eurosoft	1745	1571
Intel 386/486 C Code Builder	695	575
MetaWare C 386/486 1.7	795	669
MetaWare C 386/486 2.4	795	669
MetaWare Professional PASCAL	895	806
NDP C-386 by MicroWay	895	806
NDP C-486 by MicroWay	1195	1076
NDP FORTRAN-386 by MicroWay	895	806
NDP FORTRAN-486 by MicroWay	1195	1076
NDP PASCAL-386	895	806
Sheffield Pascal/386 by Eurosoft	CALL	CALL
WATCOM C/386 9.0	895	599
WATCOM FORTRAN 77/386 9.0	895	719
Zortech C++ Competitive Upgrade by Symantec	199	189
Zortech C++ S & E Edition 3.0	999	693
Zortech C++ with Video by Symantec	449	337

LIBRARIES & UTILITIES

386 DEBUG by PharLap	195	175
386 Dev. Performance Pak by Sys. & Software	1995	1796
386 LinkLoc by PharLap	795	715
386 SDK by PharLap	495	435
386VMM 4.1 by PharLap	295	265
386/ASM/LinkLoc 4.0 by PharLap	1295	1166
C Windows Toolkit/386 by Magna Carta	200	180
C-Space 386 with Look & Feel	999	899
Greenleaf DataWindows 386	599	509
Link&Locate 386 by Systems Software	795	716
PC-Int 386 by Gimpel	295	205
SoftProbe 386/SIM	595	536
WindowsMaker Professional for Watcom C/386	995	895

ADA LANGUAGE

Ada Training Environment by AETECH	395	356
Adagraphics by AETECH	695	626
HALO Prof. Ada by Media Cybernetics	595	475
IntegraDA by Aetech	395	356
IntegraDA/386 by AETECH	995	896

ASSEMBLY LANGUAGE

ASSEMBLERS

386 SDK by PharLap	495	435
386/ASM/LinkLoc 4.0 by PharLap	1295	1166
Microsoft Macro Assembler	150	99
Microsoft QuickC w/QuickAssembler	199	139
OPTASM by SLR Systems	150	135
Turbo Debugger & Tools by Borland	150	113

DISASSEMBLERS

Advantage Disassembler by Lifeboat Software	295	279
DIS DOC Professional by RJ Swantek	249	224
Sourcer by V Communications	130	109
w/BIOS Pre-Processor	170	129
Unpacker by V Communications	40	36

LIBRARIES/UTILITIES

ASM Checker 1.05 by V Communications	180	162
ASM Pro Pak III by V Communications	549	494
ASMFLOW Professional by Quantasm	200	180
ASMTool by V Communications	200	180
Btrieve 5.10 by Novell	595	399
GX Dev Pak by Genus Microprogramming	695	626
w/source	1359	1223
GX Effects 2.0 by Genus	199	179
w/source	399	359
GX Graphics 2.0 by Genus	249	224
w/source	699	559
GX Text 2.0 by Genus	149	134
w/source	349	279
HALO Professional by Media Cybernetics	395	315
Magic TSR Toolkit by Quantasm Corp.	200	180
Quaid Analyzer by Quaid Software	225	203
Quantasm Power Library by Quantasm Corp.	100	90
QuickCOMM 2.0 by Soft. Interphase	149	135
Spontaneous Assembly 2.1 by BaseTwo	199	159
Visible Computer: 80286	100	90
Visible Computer: 8088 by Software Masters	80	72

BAR CODING

Autoclass Barcode by Visionshape	1250	1125
BAR-ONE by Vertical Technologies	99	89
BAR-ONE Memory Resident	195	176
BAR-ONE Professional	350	315
Bar Code Library by StrandWare	389	319
Label Matrix by StrandWare	479	431
Power Label by StrandWare	949	855
QuickDraw by StrandWare	259	233

BASIC

COMPILERS

GFA BASIC for DOS	235	212
HTBasic by TransEra	625	563
Microsoft BASIC Prof. Devel. Systems 7.1	495	349
Microsoft QuickBASIC	99	69
Microsoft Visual Basic for DOS	199	137
Competitive Upgrade	99	95
Microsoft Visual Basic for DOS Prof. Edition	495	337
Competitive Upgrade	199	189
PopBASIC Compiler by Hedge Systems	89	80
PowerBASIC by Spectra	129	116
True BASIC by True Basic	100	90
Z Basic by 32-Bit Software	150	135

DATABASE/FILE MANAGEMENT

AccSys by Copia International	395	356
Agility/VB by Apex Software Corporation	189	89
Btrieve 5.10 by Novell	595	399
BUtility by Smithware	130	112
DATABASIC 1.01 by Blue Rose	249	224
DB-FABS & DABL by Computer Control	195	176
db/LIB Database Library by AJS Publishing	99	89
db/LIB Network DB Platform	575	518
db/LIB Professional Database Library	189	170
FABS Plus by Computer Control	199	179
FABS Plus Net by Computer Control	295	266
NetWare SQL by Novell	595	476
XQL by Novell	795	636
Xtrieve PLUS by Novell	995	796
True BASIC Btrieve Interface	80	72

GRAPHICS

Fastgraph by Ted Gruber Software	169	152
Graphics Workshop by Crescent Software	149	134
GRAFLIB by Sutrast	250	225
GraphPak Professional 3.1	149	135
GRASP by Paul Mace	349	314
GX Dev Pak by Genus Microprogramming	695	626
w/source	1359	1223
GX Effects 2.0 by Genus	199	179
w/source	399	359
GX Graphics 2.0 by Genus	249	224
w/source	699	559
GX Text 2.0 by Genus	149	134
w/source	349	279
HALO Professional by Media Cybernetics	395	315
Ingraf by Sutrast	350	315
LiveWindows by Software Interphase	395	356
w/Frame Grabber by Software Interphase	695	626
ProFont by TeraTech	125	113
True BASIC 3D Graphics by True Basic	80	72
True BASIC Business Graphics	80	72
True BASIC Scientific Graphics	80	72

LIBRARIES

API Toolkit for Basic by Novell	500	399
Mach2 by MicroHelp	99	89
MATHPAK 87 by Wolfram	129	116
w/source	198	189
MicroHelp Muscle	195	176
MicroHelp Network Library	79	71
MicroHelp Text	99	89
P.D.Q. 3.0 by Crescent Software	149	134
P.D.Q. COMM by Crescent Software	99	89
ProBas by TeraTech	195	169
ProBas HyperHelp Toolkit	125	113
ProBas Professional Math Library	125	113
ProBas Telecomm Toolkit	125	113
ProBas Toolkit	125	113
QB/Pro Volume 1-4 by MicroHelp	109	98
QB/Pro Volume 6 by MicroHelp	129	116
Quick-Tools by Simple Net Systems	129	116
QuickCOMM for Basic 2.0 by Soft. Interphase	149	135
QuickPak Professional 4.0 by Crescent Software	199	159
QuickPak Scientific 3.0 by Crescent	149	135
Telecomm Toolkit by TeraTech	75	68

SCREENS & WINDOWS

Designer QuickWindows 1.5 by Software Interphase	69	62
Facelt by Black & White	99	89
Flash-up by BottleWorks	80	72
Flash-up Devel. Toolbox	70	63
FlashTools! by Avis-Hill	89	80
HI-SCREEN XL Pro II by Softway	395	345
ProScreen Screen Mgmt by TeraTech	99	89
QB/Pro Volume 5 by MicroHelp	89	80
QuickScreen 3.2 by Crescent Software	59	53
QuickScreen 4.0 by Crescent Software	149	135
QuickWindows Adv. for Basic by Software Interface	149	134
w/Designer	199	179
w/source	349	314
Say What?! by Software Science, Inc.	50	45

ADDITIONAL PRODUCTS

BAS_C Commercial by Gotoless	995	895
BAS_C Economy by Gotoless	480	432
BASIC Network Library by ASCII	265	239
Btrieve Blackboxes for Layout	100	90
Business Graphs Blackboxes	50	45
Convert Toolkit for Layout	70	63
dbASE Blackboxes	100	90
Don Malin's XREF 2.2 by Crescent Software	59	53
FrontMaker for Layout	100	90
Layout by Objects Inc.	300	270
Layout C Engine for Windows	100	90
Layout Power Tools I	50	45
Multimedia Sound Manager	70	63
Graphic Tools Blackboxes	40	36
Setup Toolkit	100	90
Telecom Toolkit	100	90
Files & Folders Blackboxes	30	27
Index Cards	50	45
Text & Numbers Blackboxes	30	27
LiteSwitch by Software Interphase	49	44
Opt-Tech Sort by Opt-Tech	149	125
PC Metric Professional by Set Laboratories	199	179
ProRef 5.0 by TeraTech	50	45
Renumber by Microcense	20	19
QB Plus 1.0 by Crescent	59	53
QB/Pro Volume 7 by MicroHelp	89	80
QB/Pro Volume 8 by MicroHelp	79	71
Quick Help by Crescent	59	53
QuickHelp 1.21 by Crescent	59	53
Source Print Deluxe by Powerline	249	215
Source Print+ by Powerline	169	145
Stay-Res Plus by MicroHelp	99	89
True BASIC Sorting and Searching	70	63

LIST OURS

C LANGUAGE

COMPILERS

LIST OURS

Borland C++ & App Frameworks	749	549
Borland C++ by Borland	495	319
Instant C by Rational Systems	495	446
Lattice C 286 (w/extension)	495	446
Lattice C 6.0	475	428
MetaWare C 386/486 1.7	795	669
MetaWare C 386/486 2.4	795	669
MetaWare High C	495	446
Microsoft C/C++ 7.0	499	309
Microsoft QuickC 2.5	99	69
Microsoft QuickC w/QuickAssembler	199	139
TopSpeed C by Clarion	99	89
TopSpeed C Comp Master by Clarion	199	179
TopSpeed C Pro by Clarion	297	267
TopSpeed C Standard by Clarion	198	178
WATCOM C/386 9.0	895	599
WATCOM C 9.0	495	435
Zortech C++ Competitive Upgrade by Symantec	199	189
Zortech C++ S & E Edition 3.0	999	693
Zortech C++ with Video by Symantec	449	337

INTERPRETERS

C-terp 3.5 by Gimpel	299	239
C-terp 386	398	319

CAD/CAM LIBRARIES

CAD/CAM Dev. Kit/2D Personal by Building Block	499	449
CAD/CAM Dev. Kit/2D Personal w/source	998	898
CAD/CAM Dev. Kit/2D Prof. Edition	999	899
CAD/CAM Dev. Kit/2D Prof. Edition w/source	1998	1799
CAD/CAM Dev. Kit/3D Personal by Building Block	999	899
CAD/CAM Dev. Kit/3D Personal w/source	1998	1799
CAD/CAM Dev. Kit/3D Prof. Edition	1798	1618
CAD/CAM Dev. Kit/3D Prof. Edition w/source	3598	3238
CAD/CAM Developer's Kit/2D Personal	599	525
CAD/CAM Developer's Kit/2D Personal w/source	1198	1078
CAD/CAM Developer's Kit/2D Prof. Edition	1199	1079
TG-2D 4.0 by Disk Software Inc.	300	270
TG-3D 4.0 by Disk Software Inc.	300	270
TG-Professional 4.0 by Disk Software Inc.	500	450
TG-Utilities 1.0 by Disk Software Inc.	200	180

CODE GENERATORS

3-in-1 for C by GUI Computer	159	143
CSource with source by MBAC	595	536
dANALYST GOLD by BUZZWORDS	SPECIAL	495
DataBoss 3.5-C Version by Kedwell	695	CALL
Layout by Objects Inc.	300	270
Logic Gem by Sterling Castle	149	134
Objective-C by Stepstone	249	224
PRO-C by Pro-C Ltd.	SPECIAL	795
WindowsMAKER by Blue Sky	795	716
WindowsMAKER Professional by Blue Sky	995	695
WindowsMAKER Professional for Watcom C/386	995	895

COMMUNICATIONS LIBRARIES/UTILITIES

BreakOut II 3.20 by South Mountain	249	225
C Async Manager by Blaise Computing	219	175
C Comm Tlkt Pro/Ext by Magna Carta	300	270
C Comm Tlkt Professional	300	270
C Comm Toolkit by Magna Carta	150	135
Comm BLOC Library by Drumlin	139	125
Essential Comm 4.0 by South Mountain	329	296
Greenleaf CommLib 3.20	359	305
Greenleaf ViewComm 3.0	399	339
QuickCOMM for C 2.0 by Software Interphase	149	135
w/source	249	225
Silver Clip SPCS by SilverWare	299	239
SilverComm "C" Async Library by SilverWare	249	199
SilverComm "C" Interface	99	79
Solid Link by Solid Software	199	179
View 232 by Blaise Computing	219	175

DOCUMENTATION/SOURCE ANALYSIS UTILITIES

C Programmer's Toolbox™/PC by MMCAD	225	199
Any 2 Vol.	225	199
Prof. Edit.	395	359
Vol. 1	125	113
Vol. 1-3	300	270
Vol. 2	125	113
Vol. 3	125	113
C/ANALYST by Cater Software	250	225
C-CALL 5.0 by Software Blacksmiths	69	62
C-Clearly 1.7 by V Communications	130	117
C-CMT 5.0 by Software Blacksmiths	69	62
C-Cover by Bullseye	400	360
C-DOC 5.0 by Software Blacksmiths	189	149
C-DOC 5.0 Professional Documentation Tools	299	269
C-LIST 5.0 by Software Blacksmiths	69	62
C-METRIC 5.0 by Software Blacksmiths	59	53
C-REF 5.0 by Software Blacksmiths	59	53
Clear+ (C) by Clear Software	199	175
codan by Implements	395	359
CodeCheck Personal by Abraxas	249	237
CodeCheck Professional by Abraxas	495	470
Source Print Deluxe by Powerline	249	215
Source Print+ by Powerline	169	145
SpellCode by Geller	69	62
SpellCode Engine by Geller	249	224

Corporate Customers,
call:
(800) 422-6507

EXIT

Stuck?



Introducing Spontaneous Assembly for C/C++...

Optimizing can be a big bummer. And unless you're using Spontaneous Assembly for C/C++, you could be faced with some pretty unpleasant tasks.

Built on the platform of Spontaneous Assembly 2.1, Spontaneous Assembly for C/C++ is the fastest, easiest way to optimize and enhance your C/C++ programs in assembly...*without* coding in assembly. This package includes Spontaneous Assembly 2.1 (see below) with a compact, ready-to-use C interface, a 64-bit integer math class, header files, full source code, and over 1,500 pages of documentation jam-packed with examples in C and in-line assembly.

...And Spontaneous Assembly 2.1

Coding in assembly can be a task of mammoth proportions...unless you're using Spontaneous Assembly 2.1.

Spontaneous Assembly 2.1 puts more than 800 ready-to-use assembly routines at your fingertips so you can write the fastest, tightest code...*fast!* Its jumbo list of features includes powerful TSR and device driver support, multitasking, state-of-the-art data compression, full-featured windowing, high-speed console I/O with 28/43/50-line and multiple/virtual screen support, formatted/scripted I/O, enhanced data conversion, advanced near/far/relative heap management, 32/64-bit integer math, program and environment control, full access to your C compiler's floating point emulator, and much more...all royalty free.



Before you end up in a tight spot, order Spontaneous Assembly for C/C++ or Spontaneous Assembly 2.1 and leave your troubles behind.

1-800-445-7899

ORDERS • INFORMATION • SUPPORT

For 8088 or 80x86-based systems running DOS 2.0 or later.

Spontaneous Assembly and Base Two Development are trademarks of Acclaim Technologies, Inc.

Base Two Development • 11 East 200 North
Orem, Utah 84057 USA • (801) 222-9500 • FAX (801) 222-9521

base two
DEVELOPMENT

A DIVISION OF ACCLAIM TECHNOLOGIES, INC.

TO ORDER CALL (800) 445-7899

FILE MANAGEMENT

AccSys for by Copia International	395	356
BTree Multi-user by SoftFocus	175	158
BTree/ISAM by SoftFocus	115	104
Btrieve 5.10 by Novell	595	399
C Data Manager by Database Technologies	295	266
C Library for Btrieve by Mobius	395	355
C Programmer's Toolbox™/PC by MMCAD	225	199
Any 2 Vol.	225	199
Prof. Edit.	395	359
Vol. 1	125	113
Vol. 1-3	300	270
Vol. 2	125	113
Vol. 3	125	113
C-Index/PC for MS/C by Trio	195	176
C-Index/PLUS by Trio Systems	395	356
c-tree Plus by FairCom	595	476
c-tree Plus File Handler 6.0 by FairCom	595	476
CBTREE by Peacock Systems	159	143
Code Base 4.5 by Sequiter Software	395	295
DBAPrep by N Systems	395	343
DDF Builder by Smithware	130	117
Essential B-Tree 2.0 by South Mountain	199	179
EZTrieve by New World Software	99	89
FairCom Server	CALL	CALL
FairCom SQL Server	CALL	CALL
FairCom Toolbox	795	636
FairCom Toolbox Professional Edition	1295	1036
First SQL C 2.1 with windows support	295	266
NetWare SQL by Novell	595	476
Paradox Engine by Borland	100	75
r-tree Report Generator by FairCom	295	236
SoftC Database Library	195	176
TesSeRact File Management System by IDC	59	53
XQL by Novell	795	636
Xtrieve PLUS by Novell	995	796

GENERAL LIBRARIES

C TOOLS PLUS/6.0 by Blaise Computing	169	135
C/Utility Library 5.0 by South Mountain	249	224
CSL - C Sci. Programming by Eigenware	560	504
CSL - Sparse Matrix Package by Eigenware	259	233
Dolphin C Toolkit by Dolphin Software	149	134
DESQview API C Lib. by Quarterdeck	150	135
DESQview API C Toolkit by Quarterdeck	500	450
Greenleaf DataMath Interface	75	64
Greenleaf Financial Mathlib	395	335
Greenleaf Functions	229	195
Greenleaf SuperFunctions	299	255
Hold Everything by South Mountain	199	179
MATHPAK 87 by Precision Plus	129	116
POWER SEARCH by Blaise	169	135
/resident_C/ 4.5 by South Mountain	249	225
TSRific by South Mountain	99	89
Turbo C TOOLS 6.0 by Blaise Computing	169	135

GRAPHICS LIBRARIES

4 Sight by Sea Breeze	199	179
4 Sight 286 by Sea Breeze	399	359
4 Sight 386 by Sea Breeze	399	359
Baby Driver C Kernel by Autumn Hill Software	295	266
Baby Driver II by Autumn Hill Software	295	266
w/Presentation Graphics Option	395	356
dGE by Pinnacle Publishing	299	269
dGE Font Library Volume I by Pinnacle Pub.	59	53
dGE Icon Library Volume I by Pinnacle Pub.	59	53
Essential Graphics Chart	199	179
w/source	998	898
Essential Graphics GUI	149	135
w/source	298	268
Essential Graphics Kernel by South Mountain	199	179
w/source	398	358
ET Graphics for DOS by Software Bytes	80	72
Figaro+ by Liant Software Corporation	995	895
Flash Graphics by FlashTek	250	215
Font-Tools 1.0b by Autumn Hill Software	165	149
FontWINDOW 4.1 by Metagraphics	150	135
GEOGRAF Level One by GeoComp	149	134
GeoGraf Professional 4.0 by GeoComp	325	293
GFX Font & Icon Editor by C Source	CALL	CALL
GFX Fonts and Menu Library by C Source	150	135
GFX Graphics Library by C Source	150	135
GFX Screen Dump Library	100	90
GRAF-TEXT by StrandWare	89	80
GRAF/DRIVE PLUS Developer 3.0 by Fleming	149	134
GRAF/DRIVE PLUS Developer 3.0 w/runtime	299	269
GRAFLIB by Sutrast	250	225
Graphic 6.0 by Scientific Endeavors	465	419
graphics-MENU by Island Systems	249	224
graphics-MENU Pro-Pak	499	449
GRASP 4.0 by Paul Mace	349	314
GX Dev Pak by Genus Microprogramming	695	626
w/source	1359	1223
GX Effects 2.0 by Genus	199	179
w/source	399	359
GX Graphics 2.0 by Genus	249	224
w/source	699	659
GX Text 2.0 by Genus	149	134
w/source	349	279
HALO Professional by Media Cybernetics	395	315
Icon-Tools 2.1+ by Autumn Hill Software	165	149
Icon-Tools by Autumn Hill Software	395	356
Ingraf by Sutrast	350	315
Menuet 2.0 by Autumn Hill Software	325	275
MetaWINDOW by Metagraphics	395	355
MetaWINDOW Plus	495	435
PCX Toolkit 5.0 by Genus	249	224
w/source	599	539
PGL Toolkit by AnSoft	195	179
PGL Toolkit w/source by AnSoft	595	536
PixelPrint by Autumn Hill	125	113
Power Tools Plus by Blaise Computing	169	135
Pro-Pak by Island Systems	499	449
Quick Geometry Lib. by Building Block	199	179
SLATE by Symmetry Group	299	269
TCXL/Graphics by Innovative Data Concepts Inc.	69	62
Virt-Win 1.0 by TeraTech	299	269



Four Great C Tools in One Package...

- ◆ C-Xref for cross-referencing
- ◆ C-Tree for function call analysis
- ◆ C-Lines to intelligently print C programs
- ◆ C-Format to reformat C programs

Sample C-Lines Output

```

10 double sin( double x )
11 {
12     if( x < 0 )
13     { return -sin(-x); }
14     while( x > 2 * pi )
15     { x -= 2 * pi; }
16     return sin_1(x);
17 }

```

Six Reasons to Choose C-Vision

- ◆ Built with 386 DOS extender for high speed and so you won't run out of space
- ◆ Intelligent cross-referencing—can distinguish between declarations, uses and modifications of variables
- ◆ Intelligent labeling of trees and cross-references provides the type/prototype of variables/functions
- ◆ Uses the same syntax engine as the thoroughly tested PC-lint
- ◆ Project file compatible with PC-lint
- ◆ Numerous options to satisfy the most persnickety programmer

Sample Hierarchy Tree

```

1: tan(double), returns double, t.c 22
2: cos(double), returns double, t.c 18
3: sin(double), returns double, t.c 10 [self]
4: sin_1(double), returns double, t.c 2 [self]
   pi, double, t.c 1

```

Gimpel Software
3207 Hogarth Lane, Collegeville, PA 19426

Call Programmer's Paradise
to order today!

800-445-7899

C-Vision is a trademark of John Rex and Gimpel Software.
PC-Lint is a trademark of Gimpel Software.

IMAGE PROCESSING LIBRARIES

SUNSHOW "C" Lang. Image Library by Sun Country	350	315
Victor Image Processing Library by Catenary Sys.	195	175
Victor Image Processing Library w/source	295	265

LEX & YACC UTILITIES

MKS LEX & YACC (DOS) by Mortice Kern	249	205
PCYACC Professional by Abraxas	495	470

LINT UTILITIES

C Programmer's Toolbox™/PC by MMCAD	225	199
Any 2 Vol.	225	199
Prof. Edit.	395	359
Vol. 1	125	113
Vol. 1-3	300	270
Vol. 2	125	113
Vol. 3	125	113
PC-lint 386 by Gimpel	239	205
PC-Lint by Gimpel	139	95

MEMORY MANAGEMENT

C EMM Library 1.00 by SilverWare	199	179
C-Heap by Library Technologies	399	359
E-Mem by TeraTech	99	90
Empty Shell by Kandu Incorporate	169	152
Headroom by Helly	130	117
HEAP Expander by The Tool Makers	140	126
Hold Everything by South Mountain	199	179
Memory Toolkit by Kandu Incorporate	99	89
More Heap by Sea Breeze	135	122
MoreHeap/SafeHeap	180	162
PowerSTOR by The Tool Makers	120	108
SafeHeap by SeaBreeze Software	95	86
Super Malloc by Kandu Incorporate	149	134

MULTITASKING LIBRARIES

Interwork by Block Island	269	242
TICS Realtime Multitasking Kernel by TICS Realtime	299	269
TimeSlider by Lifeboat Software	295	266

NEURAL NETWORKS

AT BiosKit by AnnaBooks	199	179
N-TRAIN by Scientific Consultant Services		
for C	329	279
w/source	469	399
Neural Shell	329	279
XT BiosKit	99	90

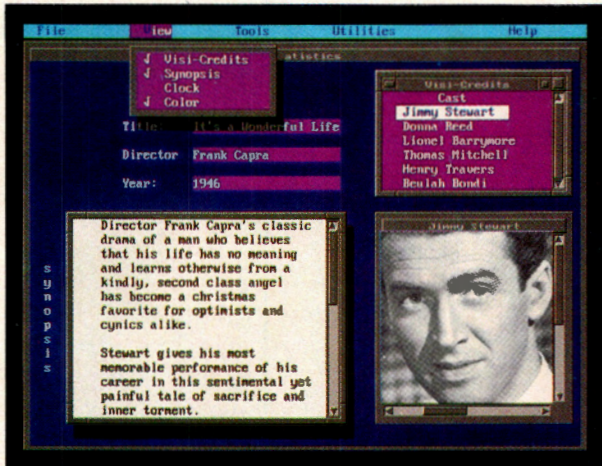
SCREENS/WINDOWS

C Windows Toolkit by Magna Carta	100	90
C Windows Toolkit/386 by Magna Carta	200	180
C-Scape with Look & Feel 3.2 by Liant Software	499	425
C-Scape with source by MBAC	595	536
Designer QuickWindows 1.5 by Software Interphase	69	62
Facelt by Black & White	99	89
FlashTools™ by Avis-Hill	89	80
GIB™ by TAO Research	475	429
Greenleaf DataWindows	395	335
Greenleaf Makeform 2.0	249	215
HI-SCREEN XL Pro II by Softway	395	345
Instant Windows for DOS by WinSoft	249	224
Magic Fields by Blue Sky Software	495	446
MEWEL Window System by Magma	295	266
object-Menu by Island Systems	369	325
PANEL Plus II by Roundhill	495	446
Post by BKS Software	399	359
POWER SCREEN by Blaise Computing	169	135
QuickWindows Adv. for C/C++ by Software Interface	149	134
w/Designer	199	179
w/source	349	314
VCScreen Creative Programming	149	134
Vermont Views by Vermont Creative	495	415
Vermont Views w/source by Vermont Creative	890	765
Vitamin C by Creative Programming	495	399

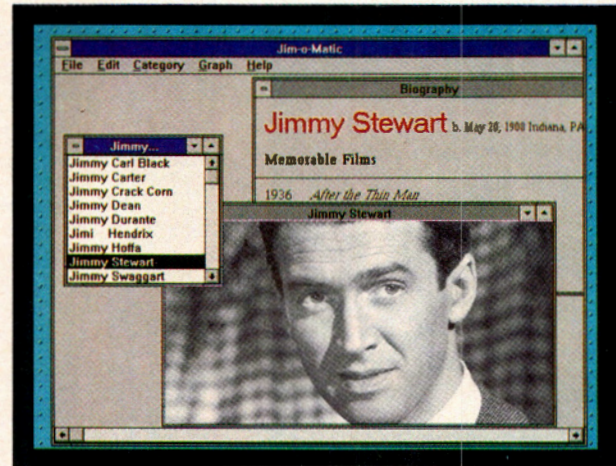
ADDITIONAL C PRODUCTS

API Toolkit by Quarterdeck	500	359
API Toolkit for C by Novell	500	399
Btrieve Blackboxes for Layout	100	90
C Shroud by Gimpel	798	718
C Vision 3.0 by Gimpel Software	139	125
C/ANALYST by Cater Software	250	225
C7toPROM by Systems & Software	379	341
CodeCheck Personal by Abraxas	249	237
CodeCheck Professional by Abraxas	495	470
CodeScreens 1.0 by Sequiter Software	95	86
CSL - C Sci. Programming by Eigenware Tech.	560	535
CSL - Sparse Matrix Package	259	233
dBASE Blackboxes	100	90
FrontMaker for Layout	300	270
Layout by Objects Inc.	100	90
Layout C Engine for Windows	100	90
Layout Power Tools I	50	45
Multimedia Sound Manager	70	63
Graphic Tools Blackboxes	40	36
Telecom Toolkit	100	90
Files & Folders Blackboxes	30	27
Text & Numbers Blackboxes	30	27
Network C Library by ASCII	295	265
PC Metric by Set Laboratories	199	179
PC Metric Professional by Set Laboratories	199	179
POWER SEARCH by Blaise	169	135
ReportEase for DOS by Sub Systems, Inc.	349	315
Window Ed./File Browser App. Piece by South Mtn.	129	116
TCXL Advanced Utilities Disk by IDC	59	53
TCXL by Innovative Data Concepts	99	89
TCXL Professional by IDC	299	269
TCXL-386 by Innovative Data Concepts	295	266
TCXL/Editor by IDC	69	62
TCXL/Objects by IDC	69	62
TesSeRact Compression System by IDC	59	53
TesSeRact CXL User Interface by IDC	99	89
TesSeRact Developer's Workshop by IDC	679	611
TesSeRact Printer Control System by IDC	59	53
TesSeRact Programmer's Power Pak by IDC	369	332
TesSeRact Ram Res. Dev. Sys. by IDC	149	134

Not since Jimmy Stewart has there been such a combination of character and good looks.



C-scape® lets you easily create handsome and completely portable character-based applications with integrated graphics.



C++/Views™ lets you easily create handsome and completely portable applications for MS Windows and other GUI environments.

Hollywood isn't the only place that can make things look good on the screen.

We offer a complete line of user interface toolkits to make your own applications become stars.

Even better, our toolkits let your applications appear on screens everywhere — from DOS to Windows to UNIX and more — without modification.

C-scape. The most flexible user interface package for character-based applications.

C-scape is a true windowing environment that provides C programmers with a library of powerful functions such as scrolling windows, mouse support, menus, and graphics.

Look & Feel®, C-scape's interactive screen designer, makes prototyping and code generation almost effortless.

C-scape supports both text and graphics mode for DOS, extended DOS, UNIX, and VMS platforms. It's a smart choice if you want to add a graphics look to existing text applications.



C++/Views. The leading C++ class library for fast development of better looking GUI applications.

C++/Views contains over 100 proven and totally portable C++ object classes for GUI development.

These classes shield you from the underlying GUI environment and API — slashing development time on GUI programming up to 75%.

C++/Views is independent of compiler, operating system, and hardware — so you get guaranteed portability to MS Windows, OS/2 PM, UNIX/Motif, and others.

C++/Browse™, a powerful source code browser comes free with C++/Views, as does a sophisticated documentor.

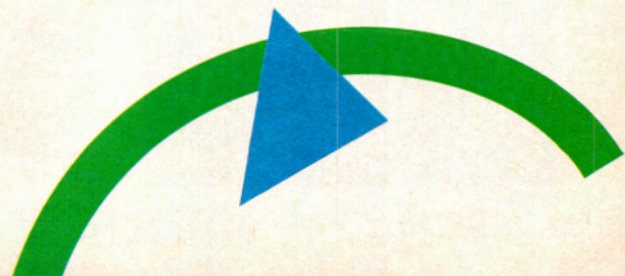
Both products come with source code — FREE.

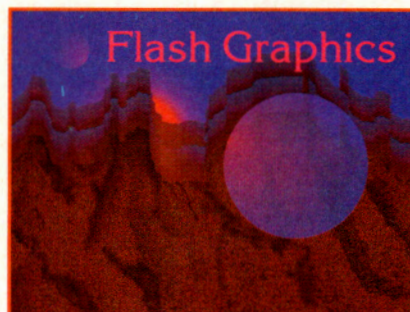
To order call Programmer's Paradise at 1-800-445-7899. C-Scape 4.0 and C++/Views 2.0 now available!



LIANT

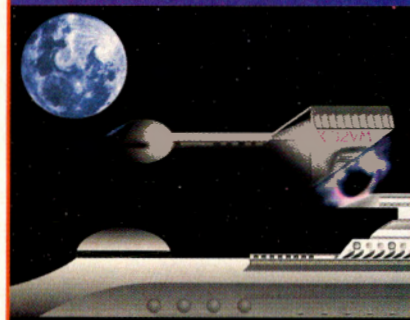
All trademarks belong to their respective companies. Copyright © 1992 by Liant Software Corporation, 959 Concord St., Framingham, MA 01701.





- Real & protected mode 16-bit support
- 32-bit protected mode support
- Wide range of graphic adapter support
- Virtual screens
- Multiple simultaneous graphics adapters
- BGI interface available

\$250, No Royalties



X-32VM 32-bit DOS Extender

- Up to 3.5 gigabytes of virtual memory
- Ultra compact, self-contained executables
- Fully compatible with Zortech's DOSX
- Support for Watcom C9.0/386
- Flash Graphics and FlashView compatible

\$250, No Royalties



Flash View

- Source level debugger for C++, C and assembler programs.
- Easy to use expansion of classes, structures, pointers, arrays, etc.
- Powerful run-time memory protection detects pointer bugs
- Full nested call traceback display with automatics and parameters
- Unlimited number of break and trace points
- History buffer for recording up to 32,000 source lines and variables
- Program execution time recording for timing analyses
- Dual monitor debugging

\$250

FlashTek is proud to offer former Zortech products, by the original authors, now with support for other compilers. New features, fantastic support, no royalties, and great prices.

ORDERS 800-397-7310

FlashTek, Inc.
121 Sweet Ave.
Moscow, Idaho 83843
Info: 208-882-6893
Email: flash@proto.com
FAX: 208-882-7275

Murray Communications
53 Harrowby Lane
Grantham
Lines
England NG31 9HZ
Voice & FAX
44-476-74108

Borland, BGI, Watcom and Zortech are trademarks of their respective companies.

C++ LANGUAGE

COMPILERS

LIST OURS

Borland C++ & App Frameworks	749	549
Borland C++ by Borland	495	319
High C/C++ by MetaWare	795	669
Intek C++ by Draiken	495	446
Microsoft C/C++	499	309
TopSpeed C++ by Clarion	99	89
TopSpeed C++ Comp Master by Clarion	594	535
TopSpeed C++ Pro by Clarion	297	267
TopSpeed C++ Standard by Clarion	198	178
Turbo C++ by Borland	100	69
Zortech C++ Competitive Upgrade by Symantec	199	189
Zortech C++ S & E Edition 3.0	999	693
Zortech C++ with Video by Symantec	449	379

CLASS LIBRARIES/UTILITIES

3-in-1 for Borland C++ by GUI Computer	259	233
C-CALL 5.0 by Software Blacksmiths	69	62
C-Clearly 1.7 by V Communications	130	117
C-CMT 5.0 by Software Blacksmiths	69	62
C-Cover by Bullseye	400	360
C-DOC 5.0 by Software Blacksmiths	189	149
C-DOC 5.0 Professional Documentation Tools	299	269
C++/Views by Liant Software Corporation	495	421
C-LIST 5.0 by Software Blacksmiths	69	62
C-METRIC 5.0 by Software Blacksmiths	59	53
C-REF 5.0 by Software Blacksmiths	59	53
Code Base 4.5 by Sequiter Software	395	295
Dynamic Object C/C++ by GUI Computer, Inc.	99	90
ET Windows by Software Bytes	80	72
Greenleaf Financial Mathlib++ 1.0	199	169
Imaging Objects w/source 2.0 by Quinn Comm.	349	314
Linpack.h++ 1.1 DOS by Rogue Wave	299	269
w/source	499	449
M++ Array by Dyad	119	101
M++ ODE Module by Dyad Software	195	175
M++ Optim by Dyad	135	122
w/source	195	176
M++ Quad by Dyad	135	175
w/source	195	176
M++ Scientific by Dyad	295	265
w/source	495	449
all modules	195	175
M++ LSM by Dyad	135	119
w/source	195	179
M++ OPTIM by Dyad	135	119
w/source	195	179
M++ QUAD by Dyad	135	119
w/source	195	179
M++ SUM by Dyad	135	119
w/source	195	179
Math.h++ 4.1, DOS by Rogue Wave	99	89
w/source	299	269
Matrix.h++ 1.1 DOS w/source	399	359
ObjectChart C++ by GUI Computer, Inc.	99	90
w/source	299	269
ObjectTable C by GUI Computer, Inc.	79	70
w/source	199	179
ObjectTable C++	99	95
w/source	259	235
ObjectCraft by ObjectCraft	399	359
ObjectProfessional for C++ by TurboPower	249	195
ObjectTable C/C++ by GUI	359	323
Spontaneous Assembly for C/C++ by Base Two	279	225
TIER by Genesis Development	199	179
Tools.h++ multi-user (DOS)	499	449
Tools.h++ w/templates by Rogue Wave	99	89
w/source	299	269

COMMUNICATIONS LIBRARIES

Greenleaf Comm++ 1.0	199	169
----------------------------	-----	-----

GRAPHICS LIBRARIES

Flash Graphics by GlashTek	250	215
ObjectGraphics for C++ by Symantec	195	140

SCREENS & WINDOWS

Poet by BKS Software	399	359
ProtoView Screen Mgmt Facility by Protoview Dev.	395	CALL
QuickWindows Adv. for C/C++ by Software Interface149 ..	134	
w/Designer	199	179
w/source	349	314
Style by Software Ingeniuties	250	199
zApp for DOS/Win w/source by Inmark Development	495	446
Zinc Interface Library for DOS & Windows	400	360
w/source	500	450

CASE TOOLS

Analysis Manager by Evergreen CASE Tools	195	176
EasyCASE Devlp'r's Edit. by Evergreen Case Tools	795	715
EasyCASE Plus 3.1 by Evergreen Case Tools	495	445
EasyCASE Professional	649	539
POSE Complete 10-Module Workstn. by CSA	2995	2696
POSE Data Model Toolkit	1195	1076

COBOL LANGUAGE

COMPILERS

CA-Realia COBOL 4.0 by Computer Associates	995	896
Micro Focus Professional COBOL	1250	1125
Microsoft COBOL	1250	881
Personal COBOL by MicroFocus	149	134
RM/COBOL Development Pack	CALL	CALL
RM/COBOL Development Pack+	CALL	CALL

LIBRARIES/UTILITIES

Btrieve 5.10 by Novell	595	399
CA-Realia CICS by Computer Associates	995	896
CA-RealMENU by Computer Associates	150	135
Hi-SCREEN XL Pro II by Softway	395	345
NetWare SQL by Novell	595	476
Say What?! by Software Science, Inc.	50	45

Micro Focus Professional COBOL

Micro Focus Professional COBOL combines the industry leading PC COBOL compiler with the additional tools necessary to develop industrial strength business applications quickly and efficiently. DOS, Microsoft Windows and OS/2 programmers can build and test small-to-large scale applications targeted to standalone PCs, networked PCs or even mainframes. The compiler is compatible with all major COBOL dialects, including: ANSI '74, ANSI '85, Ryan McFarland COBOL and the major IBM mainframe variants.

Micro Focus Professional COBOL contains ANIMATOR, the industry's leading source-code debugger, which allows a programmer to interactively view and modify the flow of data and execution throughout an entire application. Other utilities include: an interactive screen painter, a COBOL tailored program and text editor, an extended memory manager, a directory list and search facility, a report design and generation utility and a cross-language debugging tool.

Professional COBOL provides an integrated menu system, an advanced run time environment and facilities for building and packaging applications. It supports network file sharing, client-server communication, Novell Btrieve file processing and interfaces to most of the popular SQL products.

Dialog System - Micro Focus Dialog System enables developers to prototype and create IBM CUA-compatible graphical and character oriented user interfaces that are portable across many operating environments, including OS/2 Presentation Manager and Microsoft Windows. With Dialog System, user interface development can be isolated from a program's business logic, increasing program performance and making user interfaces easier to develop and maintain.

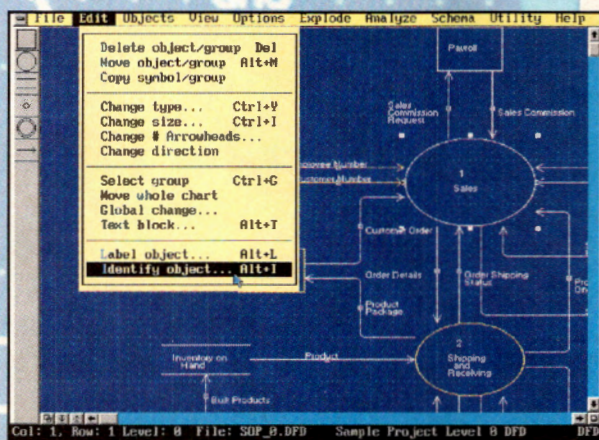
MICRO FOCUS
"A Better Way of Programming"

EasyCASE Plus

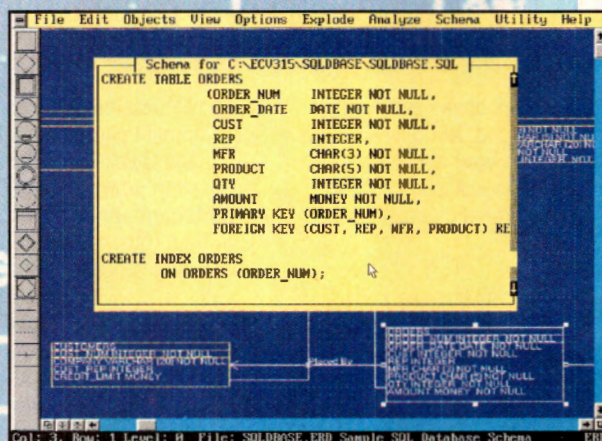
Version 3.1

DEVELOPER'S EDITION

Easy enough to use on day one...



Powerful enough to use every day.



We Just Made SQL and xBASE Database Development Easier!

All of the methodology support you need for structured analysis, design and data modeling is now available in one easy to learn, easy to use, PC-based CASE tool.

Methodologies:

- Gane & Sarson
- Yourdon/DeMarco
- Ward-Mellor/Hatley
- SSADM
- Yourdon/Constantine
- Martin
- Chen
- Bachman
- IDEFIX *New!*

Diagram Types:

- Data Flow Diagrams (Including real-time extensions)
- State Transition Diagrams
- Structure Charts
- Entity Relationship Diagrams
- Data Model Diagrams
- Entity Life History
- Logical Data Structure

Use the dBASE III compatible data dictionary to support record and element definitions, control tables, hierarchical chart linking, and process decomposition to text files. Also includes an integrated data dictionary and reports manager.

Analyze and verify your work. Use the analysis features to check the accuracy of your project and highlight errors. Level balance the processes, stores and flows on linked diagrams. Check your diagrams against methodology rules and verify data dictionary entries, including record and element definitions.

Convert your design into a DDL (Data Definition Language) for use by your target DBMS to create database schemas in dBASE III and the following SQL formats: ANSI SQL, dBASE IV, ORACLE, DB2, Sybase, SQLServer, SQLBase, Ingres, Informix, OS/2 EE, and Rdb/VMS.

A consistent "Windows-like" IBM SAA/CUA graphical user interface (GUI) makes it easy to learn and easy to use. Using the EasyCASE Plus Developer's Edition is as straightforward as using any other application software on your PC. A sample project, on-line help, tutorial, methodology guide, and extensive documentation get you started and productive without expensive training classes.

We offer full functionality at a low price:

EasyCASE Plus Developer's Edition ... \$795

Also available:

EasyCASE Professional \$649

EasyCASE Plus \$495

*Call today for your information kit**

(206) 881-5149

Volume discounts available. Call for details!

**Evergreen
CASE
Tools**

8522 154th Avenue NE
Redmond, WA 98052
USA
FAX: (206) 883-7676

*Demo disk available on request.



Come and see us at:
CASE World '92, Boston
September 30-October 2, Booth #527B and
Database World, Chicago
December 9-10, Booth #627

Requirements: Runs on: IBM PC-AT and compatibles, EGA/VGA color, mouse, Printers/Plotters supported: Epson FX & LQ, IBM Graphics & Proprinter X24, HP QuietJet, DeskJet & LaserJet II and III, HP Plotters, PostScript.
Copyright 1992 by Evergreen CASE Tools, Inc. All Rights Reserved. All trademarks are the property of their respective companies.

"THE BEST dBASE."

Fortune 50
Technology Manager



DISPLAY YOUR TALENTS WITH ARAGO.

It's time to step into the spotlight. We'll make you look good. Serious dBASE[®] developers can finally get the rewards their talents deserve by using Arago.

PRIZE-WINNING SPEED

Arago dBaseXL[™] is the fastest database management system available today. Independent benchmarks show that Arago dBaseXL runs up to five times faster than dBASE IV[®] and that it also leaves all other dBASE compatibles behind.

dBASE IV COMPATIBILITY

Arago dBaseXL is compatible with dBASE IV and dBASE III Plus[™]. It not only reads dBASE III Plus memo fields, but can even restore them. Arago memo fields can also store any kind of data, including graphics and digitized sound.

MODERN CUA INTERFACE

Full mouse support comes with Arago dBaseXL's elegant CUA (Common User Access) compliant user interface. Modern features like pull-down menus,

radio buttons, check boxes and multiple panels are all included. Not only is Arago CUA compliant, but your application created under Arago will also be CUA compliant with automatic mouse support.

INNOVATIVE PROGRAMMING TOOLS

You can create outstanding applications with Arago's innovative tools. Its Panel Painter lets you quickly create your own event-driven interface. Arago's sophisticated Debugger easily allows corrections in your source code. And thorough testing by the Test Coverage Analyzer guarantees that you will deliver a winning application.

A CHAMPION FAMILY

To be a champion you cannot compromise your efforts. So get "the best dBASE" to show off your talents. The Arago family consists of *Arago dBaseXL*, the fastest interactive database environment; *Arago Quicksilver*, the only dBASE IV compatible .EXE compiler; and

Arago Professional, the complete development package that includes both dBaseXL and Quicksilver[™]. Create your application under Arago dBaseXL, compile it with Arago Quicksilver, and distribute it without royalties in .EXE form with your source code fully protected.

Award yourself. Get the edge with Arago, and develop a taste for success. See for yourself why users like Kevin Block at Chevron are calling Arago "The Best dBASE."

**CALL PROGRAMMER'S PARADISE
AT 1-800-445-7899
TO PLACE YOUR ORDER**



ARAGO
"The Best dBASE."

WORDTECH

WORDTECH SYSTEMS, INC. • 21 ALTARINDA ROAD • ORINDA, CA 94563 • U.S.A. • TEL: (510) 254-0900 • FAX: (510) 254-0288
Arago and dBaseXL are trademarks of WordTech Systems, Inc. Quicksilver is a trademark of Quicksilver Software, Inc. licensed to WordTech Systems. dBASE and dBASE IV are registered trademarks, and dBASE III Plus is a trademark of Borland International, Inc. All other names mentioned herein are trademarks or registered trademarks of their respective companies. © 1992 WordTech Systems, Inc.

DOS DEVELOPMENT SOFTWARE

DATABASE

CLIPPER LIBRARIES

	LIST OURS
Artful Library by Artful Applications	199 179
Artful Two	295 266
CALC (DB) by Pinnacle Publishing	299 269
Casual.lib by Extrasensory Software	100 90
ClipWord/SpellClip 2.0 by Action Plus	200 180
CLIPWKS by Grumpfish Inc.	199 179
dCLIP by Donnay	349 314
DESQview API Clipper Lib. by Quarterdeck	150 135
DESQview API Clipper Toolkit by Quarterdeck	500 450
ESCAPE by Pinnacle Publishing	149 135
FUNCKY Library by DLESKO	249 224
FUNCKYlib by DLESKO	495 445
GetIt by Pinnacle Pub.	149 134
GRAF-TEXT by StrandWare	89 80
Grumpfish Library by Grumpfish Inc.	199 179
Grumpfish Menu	199 195
Grumpfish Reporter Standard Version	159 135
IDC Programmer's Utility Disk by Innovative Data	59 53
IDL (2) by IDC	199 179
Nantucket Tools II by Computer Associates	695 499
Overlay by SofDesign	149 134
PostScript Library for Clipper	150 135
Pro Clip by SofDesign	99 89
PS ERROR by Pinnacle Pub.	149 134
SEZ YOU Professional by Pinnacle Pub.	149 134
Silver Clip SPCS by Silverware	299 239
SOS Help! v1.25 for Clipper by Market Service Assoc.	125 113
SUNSHOW "C" Lang. Image Library by Sun Country	350 315
SUNSHOW Adv Image Tiki by Sun Country	350 315
SUNSHOW Adv Image Converter	250 225
SUNSHOW Database Professional	200 180
Telepathy by Extrasensory Software	220 199
Vern Six's Clipper Toolbox by FrontLine Software	140 95
ZipCode/Clip 2.0 by Action Plus	100 90

CODE ANALYZERS

dBFind by Software Dev. Factory	99 89
dBPower by NV Systems	98 88
Dynamic Data Dictionary for CA-Clipper by Market Service	100 85
Lamara Data Dictionary by Market Service Assoc.	395 335

COMMUNICATIONS LIBRARIES

ADComm 99	129 116
Clarion Communication LEM	199 179
Comm Tools for Clipper by Pinnacle Publishing	299 269
Comm Tools for FoxPro by Pinnacle Publishing	299 269
CommTools by Pinnacle Publishing	299 269
Silver Clip SPCS by Silverware	299 239
SilverComm Library by SilverWare	249 199
SilverFox Library SPCS	299 239
SilverPak by SilverWare	369 295
Telepathy by Extrasensory Software	220 199

DATABASE MANAGEMENT SYSTEMS

ARAGO dBase/Paradox 2.5 by WordTech	699 595
ARAGO dBase 2.0 by WordTech	699 595
ARAGO Professional 2.0	1199 945
Clarion Personal Developer 2.0	79 69
Clarion Professional Developer 2.1 by Clarion	845 459
Competitive Upgrade	195 185
Clarion Software Distribution Kit 2.0	199 179
Database/Supervisor 1.0 by IntelligenceWare	490 441
DATABASIC 1.01 by Blue Rose	249 224
DataBoss 3.5-C Version by Kedwell	695 639
DataBoss 3.5-Pascal Version by Kedwell	695 639
DataBoss Xbase Engine by Kedwell Software	99 89
DataEase 4.2 by DataEase Int'l	795 716
Data Transfer Utility by IntelligenceWare	CALL 639
dBASE III Plus by Borland	695 521
dBASE IV 1.5 by Borland	795 589
dBASE IV Developer's Edition by Borland	1295 971
DBXL by Wordtech	249 224
ExtendBase for NetWare 386 by Extended Systems	595 535
FoxBASE + 386 Developer's Edition by Microsoft	595 417
FoxBASE + Developer's Edition by Microsoft	495 347
Multi-User by Microsoft	595 417
FoxPRO by Microsoft	795 549
FoxPRO Distribution Kit by Microsoft	500 350
FoxPRO by Microsoft 6-Pack	895 529
Magic PC 3.5 by Aker	800 720
MicroSTEP QS by SYSCORP International	895 805
Paradox	795 596
Paradox Engine by Borland	100 95
Paradox Lan Pack	295 221
Paradox Special Edition	100 75
Quadbases-SQL	795 639
R:BASE by MicroRim	795 639

CODE GENERATORS

ddMap 2.0 by CS Comm.	495 446
ERwin/DBF by LogicWorks	795 716
Genifer by Bytel	395 356
Logic Gem by Sterling Castle	149 134
R&R Code Generator by Concentric	199 159
UI 2 Dvlp'r's Release by Template Garden Software	595 536
UI 2 Touch and Go by Template Garden Software	395 356
Vern Six's Screen Designer/Translator by FrontLine Software	120 79

COMPILERS

ARAGO QuickSilver 2.0 by Wordtech	799 645
Clipper by Computer Associates	795 499
Matt Whelan's Compiler Kit by Computer Associates	1190 845
QuickSilver by WordTech Systems	799 719
QuickSilver/SQL	1495 895
R:BASE Compiler by MicroRim	895 806

DEBUGGING TOOLS

dBUG by HJS Research	195 176
----------------------	---------

DOCUMENTATION UTILITIES

Clear for dBASE 2.1 by Clear Software	199 175
Documenter by Template Garden Software	295 266
EasyFlow by HavenTree Software	280 245
ManualWriter by Kedwell	249 224
Source Print Deluxe by Powerline	249 215
Source Print+ by Powerline	169 145

EDITORS

BRIEF by Borland	249 95
Cheetah by Software Science	145 131
ED for DOS by Lifeboat Software	199 159
Evolve for Multi-Edit by Bill French	179 161
Multi-Edit Professional	199 139
Multi-Edit Standard	129 116
PlayRight Pro by the Burgess Group	150 135
PlayRight Pro Network Pack by the Burgess Group	300 270

GRAPHICS LIBRARIES

Clarion Graphics LEM	199 179
ColTrax 1.0 by Blackhawk Data	149 134
Database Graphics Toolkit ("dGT") by Blackhawk	345 305
dGT-Unlimited v3.02	595 535
dGT-Developer's Edition	698 595
dGE by Pinnacle Publishing	299 239
dGE Font Library Volume I by Pinnacle Pub.	59 53
dGE Icon Library Volume I by Pinnacle Pub.	59 53
Espia by Devices, Inc.	295 249
Espia (LAN Version)	395 335
Espia Enhanced	595 505
Espia Enhanced (LAN Version)	695 589
Fastgraph by Ted Gruber Software	169 152
Flash Graphics by FlashTek, Inc.	175 158
FLIPPER Graphics Library 5.0 by Pro Works	295 266
FoxGraph by Microsoft	295 207
GRAF-TEXT by StrandWare	89 80
Graphics Server SDK by Pinnacle	495 445
Graphics Toolkit 2.0 by Knowledge Garden	179 161
Mach-4 by Buzzwords	295 266
Menuet III/C++	375 345
PCX Toolkit 5.0 by Genus	249 224
QualBase by QualWare	190 169
Silver Paint Library by SilverWare	129 103
SUNSHOW Adv. Image Converter by Sun Country	250 225
SUNSHOW Database Professional	200 180
T-BASE 3.0 by Videotex	495 419

LINKERS

.RTLink by PocketSoft	295 265
.RTLink/Plus	495 445
Blinker 1.5 by Blink, Inc.	249 224
Blinker 2.0 by Blink	299 269
PLink86+ by Lifeboat Software	395 335

REPORT WRITERS/QUERIES

Clarion Report Writer by Clarion	199 179
dANALYST GOLD by BUZZWORDS	SPECIAL 495 99
dQUERY 4.5 by Quadbase	195 176
Neural/Query by IntelligenceWare	490 449
Pro Print Report Generator by Conquest Data Systems	189 170
Q+E Database Editor (Q+E) by Pioneer Software	299 269
R&R for Oracle or XDB by Concentric	299 269
R&R Report Writer by Concentric Data Sys.	495 446
R&R Report Writer for dBASE & comp. 4.0	249 159
R&R Report Writer for Netware SQL/Btrieve 3.0	299 269
R&R Worksheet Report Writer by Concentric	249 219
R:BASE Extended Report Writer by MicroRim	295 266
Snow Report Writer by Snow Software	695 626
Snow Report Writer-LAN by Snow Software	995 896

SCREENS & MENUS

dCLIP by Donnay	349 314
Facelt by Black & White	99 89
FlashTools! by Avis-Hill	89 80
HI-SCREEN XL Pro II by Softway	395 345
MenuBank by Kedwell	149 134
object-Menu Jr. by Island Systems	129 109
Say What?! by Software Science, Inc.	50 45
Screen Shooter by Buzzwords	95 86
Scrimmage by Synergy	149 134
Vern Six's Screen Design by Frontline	120 79

SQL

ERwin/SQL	995 896
First SQL-RDBMS by FFE	495 446
Microsoft SQL Server	CALL 349
Microsoft SQL Server Programmer's Toolkit	495 371
Paradox SQL Link	495 371
RaSQL for FoxPro by Pinnacle Publishing	299 269
RaSQL/B by Pinnacle Publishing	349 314
RaSQL/X by Pinnacle Publishing	349 314
WATCOM SQL Developer's Edition	795 639
WATCOM SQL Network Server Edition-6 user	795 639
WATCOM SQL Network Server Edition-Unlimited	1595 1279

TRANSLATORS & BRIDGES

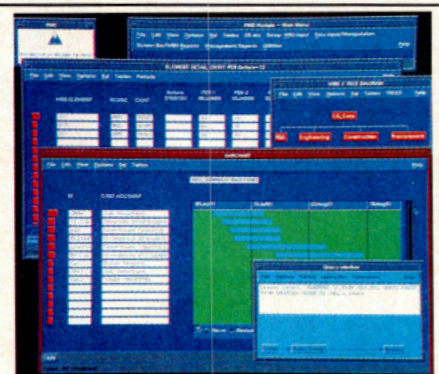
Code Base 4.5 by Sequiter Software	395 295
------------------------------------	---------

UTILITIES

Banalyze by Information Architects	99 90
Bcheck	99 90
Bcreate	29 25
Bedit	99 90
Brun	189 169
Xsupport	149 135

ADDITIONAL PRODUCTS

dSalvage by Comtech Publish	100 99
Professional	200 135
DVT: Data Visualization Tool	490 441
dVoice by Multiverse Communications	995 895
IXL: The Discovery Machine by IntelligenceWare	790 639
NetLib by Pinnacle Publishing, Inc.	299 269
NetLib for FoxPro by Pinnacle Publishing, Inc.	299 269



You Can Build Relational Database Applications in Minutes with ORIN™

...a powerful, interactive development system for relational database applications — OSF/Motif® compliant. ORIN lets you build and run database applications on multiple platforms with multiple databases.

Designed for sophisticated users and non-programmers alike, ORIN offers —

- An interactive, graphical applications development system for ORACLE®, Informix and Rdb
- On-screen Graphical Query System™
- Object-Oriented Procedural Language™
- Data joined in a single window from a combination of databases across multiple platforms
- CASE compatibility and self-documenting capabilities.

Available in both Motif and character-based window systems for VMS, ULTRIX®, and PC/DOS, ORIN provides context-based help, special bar charts and tree displays, user window control, pull down menus and WYSIWYG features that let you point and click with a mouse.

You need ORIN when you want the look and feel of OSF/Motif, increased productivity and database independence. For more about ORIN — contact Objective Solutions at 407 676-0279 or FAX 407 729-0875.



ORIN is a trademark of Objective Solutions, Inc. Other brand and product names are registered trademarks or trademarks of their respective holders.

New BOUNDS-CHECKER 2.0

Types of Memory Problems	heap checkers	BC 1.0	BC 2.0
Memory accesses out of your programs space	—	✓	✓
Writes over CODE within your program	—	✓	✓
Over-writes of your CODE by an external T&SR or driver	—	✓	✓
Run-away programs	—	✓	✓
NULL or corrupted pointers the instant they are used	—	✓	✓
*Library routine over-runs of all local arrays	—	—	✓
*Library routine over-runs of all static arrays	—	—	✓
C++ new/delete checking	—	—	✓
Library routine over-runs of allocated blocks	✓	—	✓
Heap over-runs	✓	—	✓
Freeing bad blocks	✓	—	✓
Leaving blocks un-freed (memory leakage)	✓	—	✓

* strcpy, memcpy, ...

LEARN THE FACTS ABOUT
MS-DOS MEMORY
PROTECTION TOOLS!

KNOWLEDGE
IS
POWER!

Welcome to the age of automated memory/heap protection!

NEW BOUNDS-CHECKER 2.0 is the **only** complete solution to MS-DOS memory **and** heap corruption problems.

BOUND-CHECKER 2.0 is a single, easy to use utility that automatically detects problems in your programs heap, stack or data segment and finds illegal memory accesses outside of your program or in your code. In one step, you can quickly and easily flush out some of the most insidious bugs that you regularly encounter as a DOS programmer.

Using BOUNDS-CHECKER 2.0 is simple, there are no changes to be made to your source in any way, and no linking of code or macros into your executable. When a bug is found, BOUNDS-CHECKER pops up showing you precisely where the problem is.

One of its innovative NEW features is Smart Mode. Smart Mode uses a built-in knowledge base to automatically determine if an out-of-bounds access is legitimate. This eliminates any complex decisions on your part, resulting in more power and flexibility than you may have thought possible.

Don't take unnecessary risks with your program or your customers. BOUNDS-CHECK before you ship with NEW version 2.0.

• New 2.0 Features •

- Now works with 3rd party memory managers
- Heap, stack and data segment checking
- Smart Mode decides the legitimacy of an access automatically
- No need to see assembly code - call stack lets you view source of calling routines.
- New Auto Log mode (BC doesn't pop up)
- Supports C7.0 & Borland 3.1 & VROOM

Order NOW! Only \$199

For even more debugging power, BOUNDS-CHECKER 2.0 integrates with our award-winning Soft-ICE debugger which features powerful 386/486 based breakpoints. Equipped with this formidable combination, your de-bugging arsenal is prepared for any surprise attack of the DOS Nasties.

Soft-ICE...\$386

BOUNDS-CHECKER 2.0 & Soft-ICE Bundle Only...\$499

BOUNDS-CHECKER AND SOFT-ICE ARE TRADEMARKS OF NU-MEGA TECHNOLOGIES, INC.

We're making C a Safe Language!

Call: **(603) 889-2386**

FAX: **(603) 889-1135**

P.O. Box 7780
Nashua, NH 03060-7780 U.S.A.



Nu-Mega
TECHNOLOGIES INC

RISK = NULL

30 DAY
MONEY-BACK GUARANTEE

24 HOUR BBS
603-595-0386

BRIEF 3.1 FOR DOS AND OS/2

**Now From
BORLAND**

BY DEBORAH HERATH

BRIEF 3.1 has been called the "world's most popular professional programmer's editor," and seems a natural fit for Borland International Inc, the acknowledged leader in language development tools.

Acquired by Borland from Solution Systems, BRIEF is available for both the DOS and OS/2 operating systems in one package. A cornerstone of the programming community for many years, BRIEF 3.1 supports a multitude of programming (and database) languages.

BRIEF 3.1 is well known as a productivity booster, increasing the speed of application development while reducing the likelihood of errors by off-loading those repetitive, tedious and complicated tasks associated with application development. Gene Wang, vice president and general manager of Borland's Languages Business Unit, explains why Borland bought BRIEF, and what it adds to the Borland product line.

"Borland provides the best languages for professional programmers in the marketplace, but we're not content with that," says Wang. "We also want to provide the programming tools that help our customers to become maximally productive. We're doing just that by offering the world's most popular professional programmer's editor — BRIEF 3.1 for DOS and OS/2. We all know that programmers have to manage an increasingly complex development process, and BRIEF is the best tool to simplify application development. We're excited to be able to offer both the DOS and OS/2 versions of BRIEF in one package, to ensure that our users develop "Best of Breed" applications with "Best of Breed" application tools. It's a natural, effective fit with our C++ and Pascal families of products."

Here are some of the features that have made BRIEF the editor of choice by professional programmers:

Powerful Macro Language

BRIEF 3.1 includes a comprehensive C-like macro language, with its own macro compiler and source-level debugger. The macro language enables users to modify and extend BRIEF to suit their individual programming needs.

Compilation Within The Editor

This enables the programmer to edit and compile a file within BRIEF, complete with error detection and positioning. The user may either display errors or warning in a pop-up window, or let BRIEF take him/her from line to line.

Multiple Language Support

BRIEF 3.1 supports all of the most widely-used compilers including Borland C++, Turbo Pascal, dBASE and Assembly; meaning the programmer does not have to build language-specific support for the editor.

Smart Indenting

BRIEF 3.1 recognizes statements that require a change in the indenting level without requiring the programmer to hit even a single key to indent the code.

Statement Completion

An extension of Smart Indenting, Statement Completion completes commonly used statements with one key stroke, inserting the proper delimiters and statements, and returning the cursor to the body of the statement.

Window Support

Quick reference to many files simultaneously is available because of BRIEF's multiple windows, resizable windows and zoom capabilities.

Features New To BRIEF 3.1

The new features in BRIEF 3.1 include mouse support, Extended Memory Specification (EMS), redo, and enhanced dialog box support. Mouse support allows developers to edit with less dependence upon the keyboard. A user-configurable pop-

up window offers access to frequently-used commands, and can be reconfigured by the user. In addition, the mouse enhances window control: one click can create a window that fills an entire screen, or close it out altogether. Once a window is resized, others on the screen adjust to fill the rest of the space. Text from one window can be transferred easily to another, and an edit in one window automatically changes in others. EMS gives the BRIEF user much greater access to the additional memory common in most programmer's computers. Redo and dialog box support means deleted text can be recalled and dialog boxes now include check boxes, radio buttons and push buttons.

Borland Support

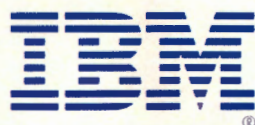
What is Borland offering to programmers with this acquisition? Besides offering two products, formally sold separately, in one package, Borland is aggressively offering BRIEF 3.1 for DOS and OS/2 at less than half the cost of what both products together were previously sold. (See Voyager's special pricing on page 8). And Borland was recently ranked #1 (tied) in Customer Satisfaction Among Users at Small, Medium and Large Sized Business in the prestigious J.D. Power and Associates survey. That means that the support of the company is behind the product.

BRIEF 3.1 for DOS and OS/2 is another exceptional value from Borland designed to make a programmer's job easier. This addition to the product line along with Borland's world-class support, continue to make Borland the overwhelming market leader in language and development tools. ♦

Deborah Herath is Channel Marketing Manager at Borland International

OS/2

Join experts from around the world for
the most important Software Development Conference
of the year in New York City



OS/2 Developer Conference & Exposition

SHERATON NEW YORK HOTEL & TOWERS
OCTOBER 18-21, 1992

This conference is exclusively designed for Developers. Now you can learn powerful new skills to enhance your OS/2 programming abilities. IBM has gathered some of the best speakers in the industry to teach you all you ever wanted to know about OS/2. Select from topics that enhance and upgrade your programming skills.

Join developers from around the world to share your ideas, skills and solutions for today's advanced OS/2 technology

The conference features:

- **Guest Speakers**
 - John A. Soyring, Director Software Development Programs, IBM Personal Systems
 - Lois Dimpfel, Director IBM PS Programming Center, Boca Raton
- Intensive Technical Sessions
- Exhibit Hall
- Computer Help Lab
- Opportunities to Meet Industry Experts
- Special Events

Registration fee is \$595.00 if you register by October 2, 1992.

This trophy is a prestigious award presented to developers whose software program exploits OS/2.2.0. If you qualify please call 407-982-6408.

For further information or to register, please contact the conference hot line 1-800-GET-OS20 (1-800-438-6720) USA & Canada or 1-203-261-6227 international.

**ATTEND AND RECEIVE
OS/2 CD-ROM* &
Borland ObjectVision**

In Recognition of
your contribution to
a new class of
OS/2 2.0 APPLICATIONS

IBM
CORPORATION

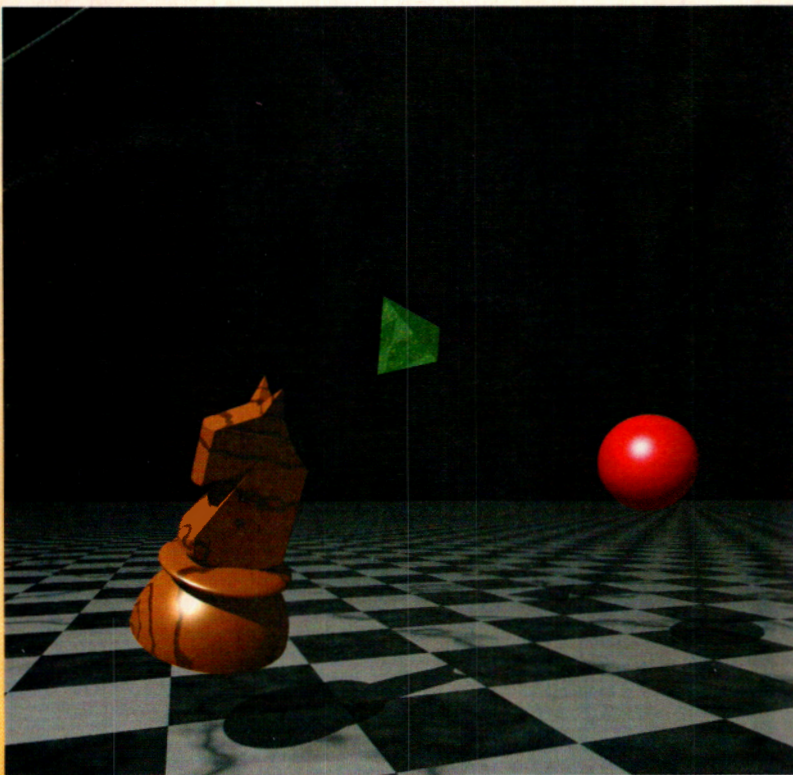
presents an award to

OS/2 Rising Above & Beyond

MultiScope Debuggers Version 2.0 *for*

INTRODUCING

- Borland C++ 3.0 and 3.1
- Microsoft C/C++ 7.0
- Microsoft C 6.0



Limited Time Offer Until
September 30th, 1992

\$99

List ~~\$379~~

To place an Order call **1-800-445-7899**

MULTISCOPE



DOS DEVELOPMENT SOFTWARE

GRAPHICS

Baby Driver C Kernel by Autumn Hill Software	295	266
Baby Driver II by Autumn Hill Software	295	266
w/Presentation Graphics Option	395	356
Data Entry by Island Systems	99	89
w/source	224	199
dGE by Pinnacle Publishing	299	269
dGE Font Library Volume I by Pinnacle Pub.	59	53
dGE Icon Library Volume I by Pinnacle Pub.	59	53
Essential Graphics Chart	199	179
w/source	998	898
Essential Graphics GUI	149	135
w/source	298	268
Essential Graphics Kernel by South Mountain	199	179
w/source	398	358
Flash Graphics by FlashTek, Inc.	250	215
Fastgraph by Ted Gruber Software	169	152
Font-Tools 1.0b by Autumn Hill Software	165	149
FontWINDOW 4.1 by Metagraphics	150	135
GEOGRAF Level One by GeoComp	149	134
GeoGraf Professional 4.0 by GeoComp	325	293
GFA-CAD for Windows by GFA Software	99	CALL
GFX Fonts and Menu Library by C Source	150	135
GFX Graphics Library by C Source	150	135
GFX Screen Dump Library	100	90
GIF SDK for Windows by Black Ice Software, Inc.	150	135
GRAF-TEXT by StrandWare	89	80
GRAF/DRIVE PLUS Developer 3.0 by Fleming	149	134
w/runtime	299	269
GRAF/DRIVE Plus DTP Driver	149	134
GRAFLIB by Sutrastof	250	225
GraphiC 6.0 by Scientific Endeavors	465	419
graphics-MENU by Island Systems	249	224
graphics-MENU Pro-Pak	449	449
GRASP 4.0 by Paul Mace	349	314
GX Dev Pak by Genus Microprogramming	695	626
w/source	1359	1223
GX Effects 2.0 by Genus	199	179
w/source	399	359
GX Games by Genus	59	53
GX Graphics 2.0 by Genus	249	224
w/source	699	559
GX Text 2.0 by Genus	149	134
w/source	349	279
HALO Image File Format Lib by Media Cybernetics	349	279
HALO Professional	395	315
Icon-Tools by Autumn Hill Software	395	356
Ingraf by Sutrastof	350	315
LEADTOOLS by LEAD Technologies	995	899
No Compression	249	225
LEADTOOLS 32	995	899
Menuet 2.0 by Autumn Hill Software	325	275
MetaWINDOW by Metagraphics	395	355
MetaWINDOW Plus	495	435
MultiChart Presentation Graphics Toolkit		
by Nanocomp	250	225
NAPCAD/3D by Napier Graphics	99	90
PCX Toolkit 5.0 by Genus	249	224
w/source	599	539
PGL Toolkit by AnSoft	195	179
w/source	595	536
PixelPrint by Autumn Hill	125	113
Pro-Pak by Island Systems	499	449
TCXL/Graphics by Innovative Data Concepts Inc.	69	62

LINKERS & LIBRARIANS

RTLink by PocketSoft	295	265
RTLink/Plus	495	445
286 Overlay Series by AtLast Software	289	259
386 Overlay Series by AtLast Software	339	305
Blinker 1.5 by Blink, Inc.	249	224
Blinker 2.0 by Blink	299	269
OPTLIB by SLR Systems	75	68
OPTLINK/Compress 3.0 by SLR	350	315
PLink86+ by Lifeboat Software	395	335
PolyLibrarian by Lifeboat Software	249	225
VMData by PocketSoft	495	445

LISP LANGUAGE

muLISP by Soft Warehouse	400	360
PC Scheme by Texas Instruments	95	86

MODULA-2

Logitech Modula-2 for Win/DOS by Multiscope	549	495
Solid B+ Toolbox by Solid Software	199	179
Solid Windows by Solid Software	149	134
Solid Windows Professional by Solid Software	495	446
TopSpeed Modula 2 by Clarion	CALL	CALL

PASCAL

COMPILERS

MetaWare Professional PASCAL	895	806
Microsoft PASCAL 4.0	300	212
NDP PASCAL-386	895	806
Professional Pascal for DOS 486 by MetaWare	495	446
Professional Pascal-Ext. DOS 386-486	795	716
Sheffield Pascal/386 by Eurosoft	CALL	CALL
SVS C3/Pascal-32-bit Dev. Sys by SVS	325	293
TopSpeed Pascal by Clarion	CALL	CALL
Turbo Pascal 6.0 by Borland	150	113
Turbo Pascal Professional 6.0	300	225

COMMUNICATION LIBRARIES

ASYNCH PLUS by Blaise Computing	219	175
Pascal Asynch Manager by Blaise Computing	189	151

FILE MANAGEMENT

B-Tree filer by Turbo Power	139	109
Btrieve 5.10 by Novell	595	475
BUtility by Smithware	130	112
DataBoss 3.5-Pascal Version by Kedwell	695	CALL
EZTrieve by New World Software	99	89
Topaz 3.0 by Software Science, Inc.	99	89
Multi-user	149	134
Topaz & Topaz LAN 3.0 by Software Science	99	89
Single User LAN 3.0	149	134
XQL by Novell	795	636
Xtrieve PLUS by Novell	995	796

GRAPHICS

Baby Driver C Kernel by Autumn Hill Software	295	266
Baby Driver II by Autumn Hill Software	295	266
w/Presentation Graphics Option	395	356
dGE by Pinnacle Publishing	299	269
dGE Font Library Volume I by Pinnacle Pub.	59	53
dGE Icon Library Volume I by Pinnacle Pub.	59	53
Essential Graphics Chart	199	179
w/source	998	898
Essential Graphics GUI	149	135
w/source	298	268
Essential Graphics Kernel by South Mountain	199	179
w/source	398	358
Flash Graphics by FlashTek, Inc.	175	158
Fastgraph by Ted Gruber Software	169	152
Font-Tools 1.0b by Autumn Hill Software	165	149
FontWINDOW 4.1 by Metagraphics	150	135
graphics-MENU by Island Systems	249	224
graphics-MENU Pro-Pak	449	449
GX Dev Pak by Genus Microprogramming	695	626
w/source	1359	1223
GX Effects 2.0 by Genus	199	179
w/source	399	359
GX Graphics 2.0 by Genus	249	224
w/source	699	559
GX Text 2.0 by Genus	149	134
w/source	349	279
HALO Image File Format Lib by Media Cybernetics	349	279
HALO Professional	395	315
Icon-Tools by Autumn Hill Software	395	356
Ingraf by Sutrastof	350	315
Menuet 2.0 by Autumn Hill Software	325	275
MetaWINDOW by Metagraphics	395	355
MetaWINDOW Plus	495	435
ObjectGraphics for Pascal by Symantec	195	140
PCX Toolkit 5.0 by Genus	249	224
w/source	599	539
PGL Toolkit by AnSoft	195	179
w/source	595	536
PixelPrint by Autumn Hill	125	113
Pro-Pak by Island Systems	499	449

LIBRARIES & UTILITIES

API Toolkit for Pascal by Novell	500	399
Async Professional 1.0 by Turbo Power	139	109
ASYNCH PLUS by Blaise Computing	219	175
DESQview API Pascal Lib. by Quarterdeck	150	135
Mach2 by MicroHelp	99	89
MATHPAK 87 by Precision Plus	129	116
ObjectCraft by ObjectCraft	399	359
ObjectProfessional by TurboPower	189	149
Opt-Tech Sort by Opt-Tech DP	149	125
Pascal TOOLS 2	100	80
Pascal TOOLS by Blaise Computing	125	100
Pascal TOOLS/TOOLS 2	175	140
Power Tools Plus by Blaise Computing	169	135
Turbo Plus 6.0 by Instant Replay	199	179
Turbo Professional by TurboPower	139	109
Turbo Vision Development Toolkit by Blaise	169	135
Windows System Library by TurboPower	149	134

SCREENS

Facelt by Black & White	99	89
Flash-up by BottleWorks	80	72
Flash-up Devel. Toolbox	70	63
FlashTools! by Avis-Hill	89	80
HI-SCREEN XL Pro II by Softway	395	345
POWER SCREEN by Blaise Computing	169	135
Say What?! by Software Science, Inc.	50	45
TurboMAGIC 2.02 by Sophisticated Software	199	179

PROFILERS

C Programmer's Toolbox™/PC by MMCAD	225	199
Any 2 Vol.	225	199
Prof. Edit.	395	359
Vol. 1	125	113
Vol. 1-3	300	270
Vol. 2	125	113
Vol. 3	125	113
Microsoft Source Profiler	79	55
Turbo Analyst 5.0 by TurboPower	129	115
Turbo Debugger & Tools by Borland	150	113

PROTOTYPING

Dan Bricklin's Demo II 3.0 by Lifeboat Software	249	229
Professional Version	995	799
Instant Replay Professional by Instant Replay	795	619
John Bickart's CBT Tool Kit for Demo II™ by Lifeboat	169	152
John Bickart's Clip Art for Demo II by Lifeboat	79	72
John Bickart's Starter Kit for Demo II by Lifeboat	149	134
Proteus 6.0 by Genus Microprogramming	349	314
ProtoFinish by Genesis	300	270
ProtoGen by ProtoView	199	99
Show Partner F/X by Brighthill Roberts	350	315
Tour de IRPRO 1.0 by Instant Replay	150	119

LIST OURS

REFERENCE GUIDES

Expert Help LAN v3.0 by SofSolutions	379	341
Expert Help Personal Use by SofSolutions	129	116
Distribution Kit #1	329	249
Distribution Kit #2	299	229
Competitive Upgrade	179	CALL
On-Line Help by Opt-Tech	149	134
QuickHelp 1.21 by Crescent	59	53
Tom Rettig's HELP by P-Check System	120	108
UpShot by Autumn Hill Software	175	158

REXX LANGUAGE

Portable/REXX by Kilowatt Software	70	63
w/book	100	90

SMALLTALK LANGUAGE

Smalltalk/V 286	200	159
Smalltalk/V DOS by Digital	125	99
Communications	50	45
EGA/VGA Color Extension	50	45
Goodies #1, #2 or #3	50	45

SORTING

Autosort/86M by Comp. Control Sys.	150	135
Opt-Tech Sort by Opt-Tech DP	149	125
Sortex by Systemat	150	135

SOURCE MANAGEMENT

codan by Implements	395	359
C Programmer's Toolbox™/PC by MMCAD	225	199
Any 2 Vol.	225	199
Prof. Edit.	395	359
Vol. 1	125	113
Vol. 1-3	300	270
Vol. 2	125	113
Vol. 3	125	113
CodeCheck Personal by Abraxas	249	237
CodeCheck Professional by Abraxas	495	470
Lugaru Make	69	62
MKS Make	149	125
MKS Programming Platform	665	538
MKS RCS	249	205
MKS Software Management Team	299	245
Opus Make 5.25 by Opus Software	129	116
Slick Make by MicroEdge	89	80
SOURCEDOC by Intelligent Solutions	345	311
Sourcerer's Apprentice by Borland	call	call
Source Manager 1.10 by TransWare	139	125
SourceSafe Version Control by Icarus Software	245	221
TLIB 5 Station by Burton Systems	300	270
TLIB by Burton Systems	139	125
TLIB LAN Version by Burton Systems	300	270

TESTING TOOLS

Gate Capture Playback by InfoMentor Software	395	356
MicroATF by Computer Applic. & Research	150	129
On Stage Test Librarian by InfoMentor Software	595	536
SQA: Manager for DOS-Single user	995	899

TRAINING

Exploring Controls by Microsoft University	495	425
Exploring Controls Add'l Products	99	89
MKS Learning UNIX Package by MKS, Inc.	179	152
Upgrading to MS DOS 5	15	14
Upgrading to MS Windows 3.1 by Microsoft Univ.	39	35
World of C++ by Borland	100	95
World of Object Windows for C++ by Borland	100	95
World of Objects by Borland	20	18
World of ObjectVision by Borland	40	38

TRANSLATORS

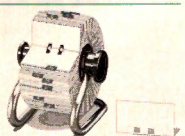
BAS_C Commercial by Gotoless	995	895
BAS_C Economy by Gotoless	480	432
Code Translator by Sequiter	195	149
Data Junction Advanced by Tools & Techniques	299	269
Data Junction Professional by Tools & Techniques	199	179
Data Junction Standard by Tools & Techniques	99	89
Datashuttle 2.0 by Softway	129	116
Globalink Translation System by Globalink, Inc.	998	899
MBMALLOC by Minnow Bear	395	356
Turbo Translator by Buzzwords	195	176

ADDITIONAL LANGUAGES

Alpha RPL by Alpha Software	595	399
Alpha RPL Companion Upgrade by Alpha Software	595	99
APL+ Plus PC	695	545
Best Choice3 3.0 by Sterling Castle	99	89
Expert Choice by Sterling Castle	495	446
Jake by English Knowledge Systems	495	446
MKS AWK (DOS) by Morrice Kern Systems	99	84
Personal REXX for DOS by Quercus	150	135
RPG II Development System by Lattice	1950	1755
Thompson AWK Compiler by Thompson Automation	249	224

Keep our number
within arm's reach!

(800) 445-7899



ADD THE POWER OF GRAPHICS TO YOUR PROGRAMS WITH GENUS

GX KERNEL 2.0



The GX Kernel forms the basis for all of the toolkits in the GX Series. Because the kernel is provided free with every GX Series Toolkit, each library can be used by itself or in combination with other GX Series Toolkits. When more than one toolkit is used in a given application, the kernel is shared – thereby reducing program size, programming overhead, and the learning curve.

FREE with every GX Series Toolkit

GX GRAPHICS 2.0



A complete graphics library supporting all graphics primitives. Use the GX Graphics toolkit instead of the Metagraphics or BGI or MS libraries and make your program faster, smaller, and more portable across compilers – while supporting more video modes.

ONLY \$249



GX EFFECTS 2.0*



Add spectacular special effects (F/X) to your programs, without being trapped in someone else's editor or slideshow program. Wipe, split, crush, slide, drip, diagonal, spiral, random, or explode your graphics. Includes new animation and sprite capabilities, as well as Sound Blaster voice file support.

ONLY \$199

* PCX Toolkit, GX Graphics, or GX Text recommended but not required.

GX TEXT 2.0



Now you can display blazing bitmapped text in any graphics mode as simply as text mode. With GX Text, you can display your textual information right along with your graphical data, using the display or virtual buffers. Includes a graphical font editor and 1MB+ of fonts.

ONLY \$149



GX GAMES 1.0*



GX Games is a collection of five full-featured games written using one or more of the GX Series toolkits. Not only are the games fun to play, but they are an excellent learning tool for the GX Series and they cover the major concepts necessary for writing graphics oriented programs. Includes source code.

ONLY \$59

* Requires one or more of the GX Series toolkits if recompiling source code. However, it is not necessary to compile the program if you are just playing the game.

PCX TOOLKIT 5.0



The number one PCX toolkit is now better than ever! With the PCX Toolkit, you can incorporate graphics into your programs quickly and easily. The PCX Toolkit includes over 100 routines to display, save, scale, and manipulate PCX bitmapped graphics from almost any program.

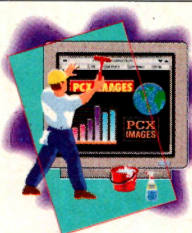
ONLY \$249

PCX TOOLKIT FOR WINDOWS 1.0



The PCX Toolkit for Windows is a Windows version of the popular PCX Toolkit for DOS. It includes over 30 functions to display, save, scale, and manipulate PCX bitmapped graphics from within any Windows program. Supports Microsoft C, Quick C for Windows, Borland C++, Turbo Pascal for Windows, Visual Basic, and any language supporting DLL's.

ONLY \$249



GENUS GX SERIES TOOLKITS FEATURE:

- No Royalties
- 30-Day Money-Back Guarantee
- Assembly Language Speed
- CGA/EGA/VGA/SVGA Support Through 1024 x 768 x 256
- Unique "Kernel" System
- Expanded, Extended, and Disk-Based Memory Support
- VESA Support
- Assembly, C, C++, Pascal, Fortran, Basic, Clipper, and Modula-2 Compiler Support
- Complete Examples and Instructional Manuals
- Unlimited Technical Support

ALSO AVAILABLE FROM GENUS...

Save 15% by ordering the GX Series Developer's Pak. The GX Developer's Pak consists of the following toolkits: GX Kernel, PCX Toolkit, GX Graphics, GX Effects, and GX Text.

ONLY \$695

TO ORDER ANY OR ALL OF THE GENUS GX DEVELOPMENT SERIES, CALL TOLL-FREE:

1-800-445-7899



CHECK, C.O.D., MONEY ORDER

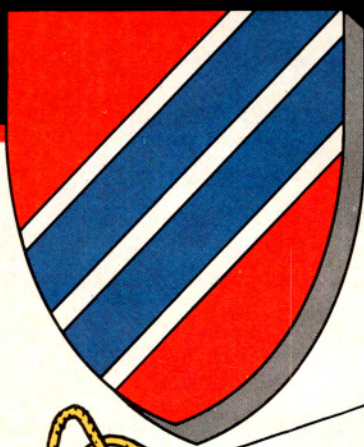
GENUS

M I C R O P R O G R A M M I N G

1155 DAIRY ASHFORD • SUITE 200 • HOUSTON, TX 77079 • (713) 870-0737
FAX (713) 870-0288 • BBS (Call for New Number)



©1992 GENUS MICROPROGRAMMING, INC. HANLOWE 4170F



*A SHIELD Series
Development Tool*

*Presenting the
Ultimate Resource Editors...*

RESOURCE SHIELD

The
Tool
for
Visually
Creating,
Editing,
Prototyping
and
Translating
all OS/2,
Windows and
Windows NT
Resources.

The fast way to
design the look and
feel of your
programs

Available for
Windows NT soon

*Browse all your resources
quickly using the visual resource
browsers. Hundreds of resource
templates get you started quickly.
Resource translators allow you
to translate resources between
all supported platforms. Organize
and manage your resources
using powerful project views.*



MICROSOFT®
WINDOWS™
COMPATIBLE



The Stirling Group

Making it easy to make™

172 OLD MILL DRIVE • SCHAUMBURG, IL 60193 • USA • CALL 708-307-9197 • FAX 708-307-9340

1-800-3 SHIELD

1-800-374-4353

WHY DEVELOP

ON

OS/2



Read the title of this article again.

You'll notice that it doesn't say, "Why develop FOR OS/2 2.0?" There are certainly some good reasons to develop for OS/2 2.0—not the least of which is the fact that IBM has already shipped several hundreds of thousands of copies. Still, there are several reasons why 2.0 is important to developers, even if they're writing code for other platforms. Let's take a look at the key advantages.

by Brian Proffit

COMPATIBILITY MEANS EXPANDED TOOL SET

A major factor of OS/2 2.0 is its compatibility with software written for DOS, Windows, OS/2 16-bit and OS/2 32-bit. This is great for end users, of course, who maintain their investment in applications. This is just as true, however, for developers. If you have a favorite DOS tool, go ahead and use it. If you have a favorite Windows tool, that works fine, as well. You also have access to all of the OS/2 development tools available—over three hundred products. Even if you are developing for other platforms, many OS/2 tools are helpful, particularly products like editors. To put it plainly, you need not just look at the OS/2 section of this catalog. With 2.0, every page shows a potential tool that can be used on OS/2.

Speaking of editors, there is an excellent developer's editor included with OS/2 2.0. The Enhanced Editor (EPM) is an outgrowth of an editor that has been used inside IBM for many years.

It is a full PM editor, using the system clipboard for cut and paste, with nearly unlimited levels of UNDO support. Language syntax assistance is included for C, Pascal, and REXX. Bookmarks are also supported to allow quick movement to key places in your code. Multiple colors and fonts can be used as well. At first glance, that may seem of little interest to a programmer, but there is a lot of productivity to be gained from little things like putting the first line of each function in a different color. When you are paging through your code, it can really help sections stand out.

IBM's Workframe/2 product is also valuable whether you are developing for OS/2 or another platform. The Workframe is essentially an integrated developer's shell, including sophisticated project-based development management functions. Its open architecture means that you can plug your favorite tools into the shell, whether they are aware of it or not. This lets you take advantage of the multi-tasking, multi-windowed develop-

ment environment regardless of the tools you use.

OS/2 2.0's compatibility also means, of course, that you can test your DOS, Windows, or OS/2 applications on the system. While I would recommend that you do your final testing on the platform under which the application will run, most of the preliminary testing can be done on 2.0, giving you continued access to its features.

MULTIPLE WINDOWS

If you never had an editor in one window, a compiler in another, a debugger in a third, a source control system in a fourth, a host session in a fifth, etc., all on the screen simultaneously, you're in for a real treat. The days of having to hotkey back and forth between full screen sessions (or worse—having to end one program to start another) are over.

PRE-EMPTIVE MULTI-TASKING

The buzzword of the 90's is productivity. Everyone is being asked to do more in less time.

Developers in particular have been on the forefront of this push for years. Waiting minutes or even hours for the results of a compile (only to discover it failed because of a missing semicolon—if the compiler knew it was missing, why didn't it insert it?), led programmers to ask for multiple machines so they could be productive on one while waiting for the other.

The multi-programming facilities of current environments go a long way toward resolving this problem. The cooperative multi-tasking that some systems use helps by allowing time-slicing. The pre-emptive multi-tasking used by OS/2 provides an even better solution by enforcing time-slicing, still giving the user consistent performance. In other words, rather than looking at an hourglass, you can be working on other things.

PROTECTED MEMORY MODEL

A programmer once described debugging DOS applications to me as "handshaking with the power switch". While it may not be that bad, there are certainly enough occurrences of having to restart the system via the power switch or the three-finger salute to cause a lot of consternation. This is true not only of DOS, but of other popular extenders and GUI interfaces available for it. Unless the operating environment runs programs in separate address spaces as OS/2 does, there is potential (particularly in the early stages of program debugging) for writing over the information of another program. This is the most common cause of program hangs and Unrecoverable Application Errors.

The protected memory model doesn't, unfortunately, keep your program from having these bugs. It does, however, keep those bugs from crashing the system. If such an error occurs, you simply close the session causing the error and continue. All other programs continue running. No time lost waiting for the system to restart, no data lost from sessions that hadn't been saved before the crash.

"UNLIMITED MEMORY"

Okay, "unlimited" is stretching it a bit. Undoubtedly at some point in the future, we will wonder how people could ever have worked on a system that could only support 512MB of virtual storage. For the time being, however, that seems like an awful lot of space. It means you don't have to worry about using the large or small versions of your compiler. It means that you don't have to worry about whether you have enough memory to call your compiler from within your editor. It means that EACH of your sessions have their own separate 512MB to access—even DOS sessions.

I realize that if you don't have enough physical memory, the system slows down. But the difference between 4MB and 16MB is speed, not functions. OS/2 means that you can effectively run whatever you want, without worrying about whether your memory will support it.

32-BIT PERFORMANCE

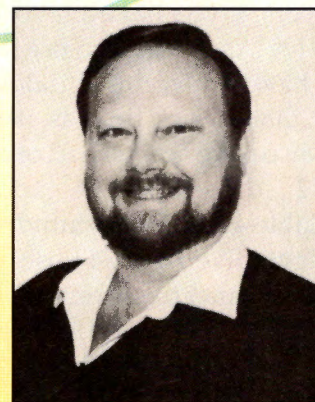
Not only can you run your DOS and Windows programs on 2.0, a number of them will actually run faster than on their native platform. 2.0's exploitation of 32-

bit technology allows much more processing power. This is especially true for disk-intensive tasks, since the FAT file system itself has been converted to 32-bit. All programs in the system benefit, whether designed for 32-bit operation or not.

AND MORE...

Oh, by the way, there's another advantage I haven't mentioned yet; price. When is the last time you heard price cited as an advantage for an IBM product? Upgrades from Windows list priced at \$49, and the upgrades from DOS list priced at \$99 are very aggressive. Even after the upgrade promotions are over, the regular list price of \$149 is surprising when you look at everything that buys you.

Your users may choose to live with the limitations of another platform. That doesn't mean that you have to do so, also.



Brian Proffit is a senior programmer in OS/2 software development strategy. He is currently responsible for OS/2 developer tools. He joined the IBM Corporation development laboratory in Boca Raton in 1983 after working as a systems engineer in Dallas.

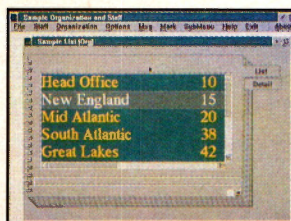
Gpf 2.0

C CODE GENERATOR

Gpf Systems, Inc.

GUI Programming Facility (Gpf) is a WYSIWYG visual programming tool for the IBM OS/2 PM environment, and the first standard language code generator to take full advantage of the new OS/2 2.0 32-bit environment and new CUA 91 controls. From an integrated point-and-click environment, the designer can not only create the desired Presentation Manager screens and controls, but add custom application logic and context-sensitive help at design time rather than later. Also creates embedded SQL to facilitate creation of Extended Services DataBase Manager designs.

List: \$995 Ours: CALL
FAXcetera #: 3582-0001



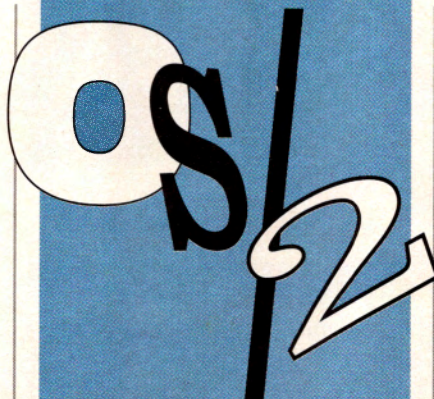
Q+E Database Library (QELIB)

DATABASE LIBRARY

Pioneer Software

Use your favorite OS/2 or Windows development tool to write multi-database applications! Any tool that can call a DLL can use QELIB. QELIB's database API makes it possible to write one application that simultaneously accesses, queries and edits information stored in these database formats: AS/400, Btrieve, dBASE, DB2 Excel files, INGRES, NetWare SQL, Oracle, OS/2 DBM, Paradox, SQLBase, SQL/DS, SQL Server, Sybase, Text files, Tandem and XDB.

List: \$399 Ours: \$359
FAXcetera #: 2625-0020



Programmer's Paradise®
presents a selection of
the best application de-
velopment tools currently
available for the OS/2®
environment.

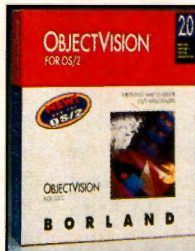
ObjectVision

CODE GENERATOR

Borland International

Now available for OS/2, ObjectVision lets you create your own great, customized applications quickly, easily and without programming. Create your customized user interface using the intuitive forms tool, shape your application's logic with graphical decision trees, then connect to your data. Links data from dBase, Paradox, ASCII and other databases that use the .dbf format. New ObjectVision for OS/2 also accesses IBM Database Manager with OS/2 Extended Edition, and REXX.

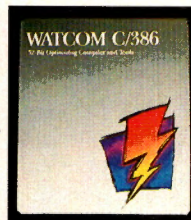
List: \$250
Ours: \$188
FAXcetera #:
1861-0091



WATCOM C9.0/386

32-BIT C DEVELOPMENT

WATCOM



Develop and debug 32-bit applications for extended DOS, OS/2 2.0 and Windows, with the most complete 32-bit C development package available. C9.0/386 is integrated with WorkFrame/2 to provide an ideal environment for developing and debugging 32-bit GUI applications and 32-bit DLLs for OS/2 2.0. Includes royalty-free DOS/4GWIN DOS extender by Rational Systems, components from Microsoft Windows SDK, compiler, linker, debugger, profiler, plus numerous development tools. Supports other industry standard 32-bit DOS extenders. Create ADS Applications for AutoCAD or embedded systems development.

List: \$895 Ours: \$599
FAXcetera #: 1683-0001

Smalltalk/V PM

SMALLTALK LANGUAGE

Digitalk

Smalltalk/V PM is a fully integrated object-oriented development environment for OS/2 PM. It produces fully compiled executables incrementally, and includes the ability to create PM objects easily and quickly. The system includes thousands of reusable objects, a push-button source-level debugger with single-stepping and object inspection, DDE support, multitasking and more. Smalltalk/V PM can call DLLs written in other languages, and is code compatible with all other Digitalk Smalltalk/V environments. All source code is included.

List: \$500
Ours: \$395
FAXcetera #:
1469-0004



(800)
445-7899

ResourceSHIELD

RESOURCE TOOL

The Stirling Group



A visual resource development tool that integrates the entire process of designing, creating, editing, translating, compiling and managing resources for applications running under OS/2 2.0, Microsoft Windows, and Windows NT. Seven powerful resource editors provide the ability to edit resources in binary or text resource files. A visual integrated development environment makes it easy to organize resource components of applications by organizing them into projects. Resource translators allow users to translate resources between any supported platform. Over 100 ready-to-use, professionally designed resource templates for dialog boxes, menus, icons and accelerators are included royalty free.

List: \$295 Ours: \$266

Bundled with OS/2: \$369

FAXcetera #: 3106-0009

SQA:ROBOT

TESTING TOOL

Software Quality Automation

Designed to automate the repetitive, labor intensive tasks involved in testing OS/2 Program Manager and Microsoft Windows applications. Create your test scripts by recording every keystroke, mouse movement and window event. With a simple point and click, you can replay one or an entire series of test procedures for unattended test automation. Available in either standalone or networked versions. Sophisticated enough for large corporate projects, yet modular enough for the individual user.



List: \$995

Ours: \$899

FAXcetera #:

1000-1802

24-hour product
information:

FAXcetera®
info on page 176

Periscope/Remote

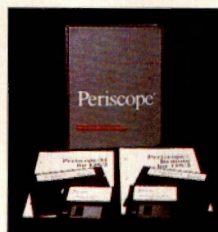
DEBUGGER

Periscope

Provides full-screen, source-level support for debugging Base and PM device drivers under OS/2 1.2 or 1.3. Thirty-two-bit support now available with the release of OS/2 2.0. Operates at the system's level (ring 0) with minimal impact on the system being debugged. Offers easy access to any memory location in the system, and can coexist with an applications level (ring 3) debugger. Requires two systems connected via a null-modem cable. The host system runs regular Periscope in DOS acting as the debugger, and the second target runs Periscope/Remote and the software you are debugging.

List: \$195 Ours: \$129

FAXcetera #: 1576-0006



Zortech C++

C++ LANGUAGE

Symantec

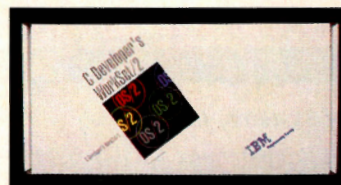


A high performance 32-bit compiler that delivers fast, professional-quality C++ code for the IBM OS/2 2.0 operating system. It

includes ANSI C and C++ compilers, ANSI standard libraries, multi-threaded support and a C++ tools class library. The C++ support conforms to the AT&T 3.0 CFRONT standards, including precompiled headers and templates. Zortech C++ for OS/2 requires the IBM OS/2 Toolkit and will integrate into the IBM C/Set Workframe and debugger.

List: \$449 Ours: \$337

FAXcetera #: 1953-0001



IBM PRODUCTS

IBM C Set/2

IBM Corporation

Includes a 32-bit SAA C compiler and a fully integrated, source-level *Presentation Manager* debugger to offer extensive run-time library support for both single and multi-tasking applications.

List: \$696 Ours: \$626

FAXcetera #: 3142-0021

IBM C Devel. WorkSet/2

The complete IBM solution combining the two programs in Workbench (the *Developer's Toolkit* and *WorkFrame/2* program packages) with C Set/2.

List: \$895 Ours: ~~\$806~~ \$369

FAXcetera #: 3142-0022

IBM Developer's Toolkit

The IBM Developer's Toolkit provides a comprehensive set of language-independent tools and code samples fundamental to building advanced OS/2 2.0 programs. Includes System Object Module compiler, resource compiler, kernel debug support and more.

List: \$119 Ours: \$107

FAXcetera #: 3142-0023

IBM Devel. Workbench

An IBM convenience kit consisting of the *Developer's Toolkit* and *WorkFrame/2* program packages allowing you to tap the full power of OS/2 2.0.

List: \$199 Ours: \$179

FAXcetera #: 3142-0024

IBM WorkFrame/2

Aids application development by organizing projects and integrating your preferred tools into the process. Features a project organizer allowing you to easily set up, combine and associate application development.

List: \$90 Ours: \$81

FAXcetera #: 3142-0025

Greenleaf Comm++

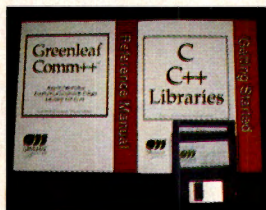
CODE GENERATOR

Greenleaf Software

Greenleaf Comm++ tears away the barriers to object-oriented programming of communications in applications for DOS, OS/2 and Windows platforms. This library is a self-contained system including abstract base classes and higher level classes which perform all of the functions needed for most communications jobs. Comm++ will accommodate interrupt-driven, circular buffered service for comm ports at baud rates to 115,200 baud. Features include support for Hayes Smartmodems, XMODEM, Kermit, XON/XOFF and VT52 and VT100 (subset) terminal emulation. Supports OS/2 1.3 or 2.0. Full source code, no royalties, free technical support.

List: \$199 Ours: \$169

FAXcetera #: 1035-0011



BRIEF—The Programmer's Editor

EDITOR

Borland International

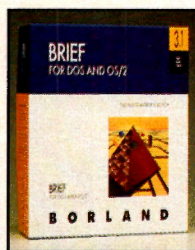
BRIEF is the best-selling editor for PC programmers. BRIEF features mouse support, EMS caching, redo and undo. Program faster and more productively with multiple windows, built-in support for 42 compilers, template editing, smart indenting, complete search/replace, total keyboard configurability, editable keystroke macros, C-like macro language with source-level debugger and more.

List: \$249

Ours: \$95

FAXcetera #:

1861-0090



24-hour product information:

FAXcetera®
info on page 176

JetForm Server

FORMS UTILITY

JetForm

Prints forms designed with JetForm Design (PC MAGAZINE Editors' Choice/PC WEEK Shootout Winner) in multi-user & network applications. Using OS/2 PM interface, merge variable length data via File passing. Named pipe and spool queue. Any client LAN, including JetForm Filler, can request forms and data merge services. One request can print multiple forms on multiple printers.

20-user List: \$1695 Ours: \$1525

Unlimited List: \$3495 Ours: \$3145

FAXcetera #: 0020-5205

Call
Programmer's
Paradise®

800-445-7899



PGL Toolkit 2.0

LIBRARY

AnSoft, Inc.

A linkable library providing bitmap printing capabilities as well as a complete graphics library for creating high resolution printer graphics in a device independent programming mode. Supports most dot matrix, laserjet, inkjet, paintjet and PostScript printers as well as PCX output format. Complete printer control is provided. No royalties!

List: \$195 Ours: \$179

FAXcetera #: 3098-0003



SPF/2

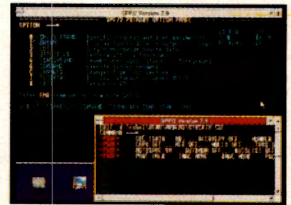
EDITOR

Command Technology

SPF/2 brings a true ISPF/PDF mainframe editing experience to PC users running OS/2 or 386 machines running DOS. Features 3270 compatibility; macro interface to OS/2's REXX; ASCII or EBCDIC file editing; program comment highlighting; and multi-directory file selection lists with text-searching capabilities. Full compatibility with Micro Focus Workbench and AD/MVS.

List: \$295 Ours: \$266

FAXcetera #: 1533-0002



C++/Views

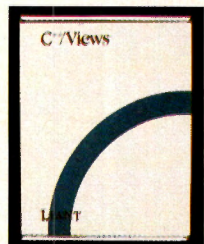
C++ LIBRARY

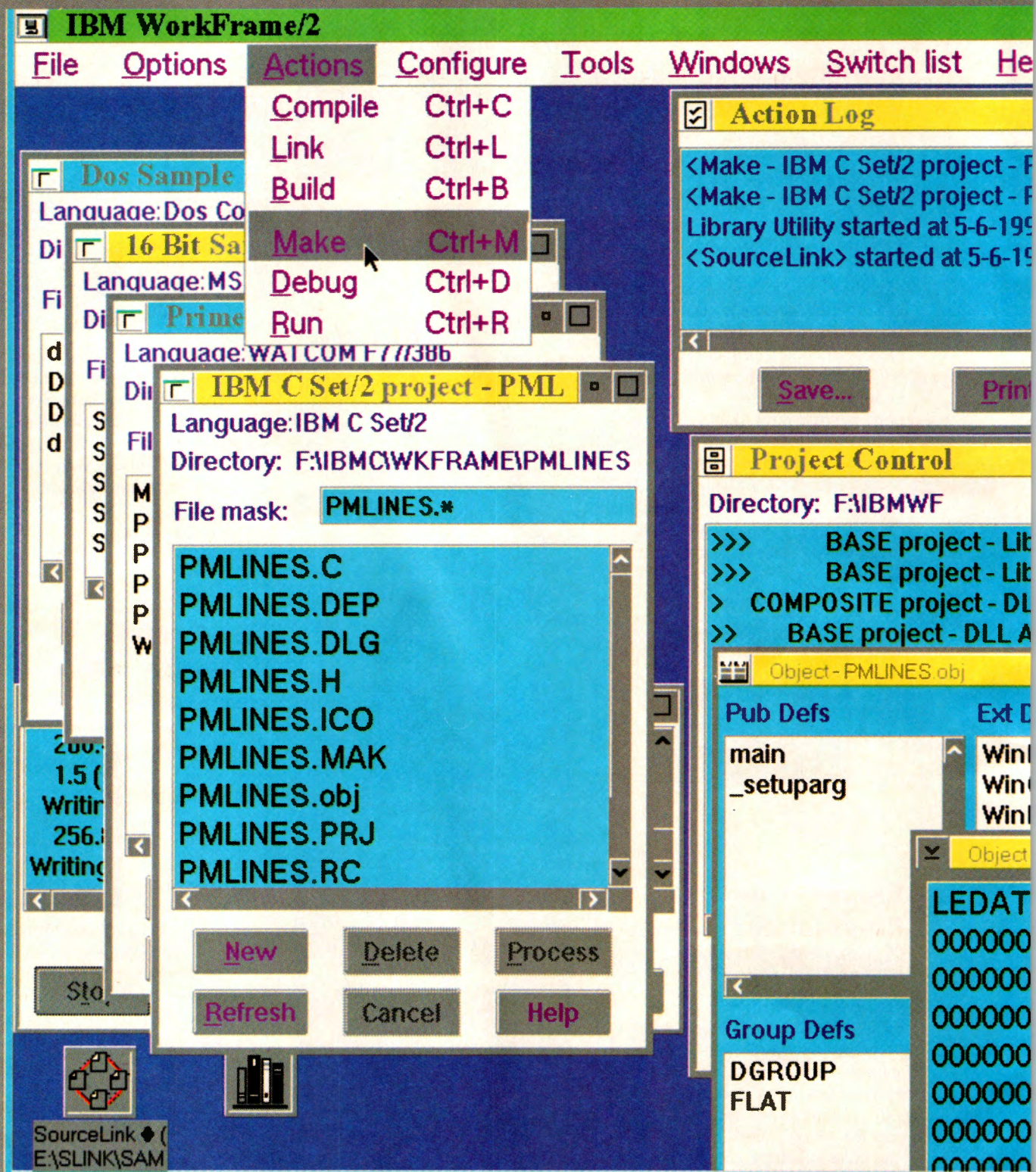
Liant Software

C++/Views is a C++ class library for creating highly portable GUI applications across OS/2, Windows and UNIX/Motif. C++/Views contains more than 100 classes to organize and shield you from the complexities of GUI programming and includes C++/Browse, a powerful source code browser and editor for both building C++ applications and creating new C++ classes.

List: \$495 Ours: \$421

FAXcetera #: 1812-0001





OS/2

To a software developer, this is what heaven looks like.

Most people wouldn't know what to make of a screen like this. But developers like you know a screen like this can help make all kinds of applications. With OS/2[®] 2.0, you can develop the DOS, Windows[™], OS/2 and host-based apps end users need. And you can do it faster and easier than ever before. Because OS/2 2.0 can make the most of your 386 or 486 processor.

Now you can edit in one window, compile in another, profile in a third and test in a fourth. Preemptive multitasking makes everything run smoothly and responsively. And OS/2 Crash Protection[™] helps shield running applications from each other, so if one goes down it won't affect the others. Instead of rebooting, you just restart the affected app and continue. And since OS/2 2.0 is a 32-bit operating system, programs are easier to write and run faster, too. Which all adds up to improved productivity and reduced development cycle time.

But maybe the best part is that for less than the cost of DOS and Windows, OS/2 gives you a whole lot more. And to keep your cycle rolling, a full range of services and support are available, like on-line help through OS/2 Support line, Bulletin Board and IBM Link. Or you can join the IBMOS2 and OS2DEV conferences on CompuServe[®], where you can meet IBMers, users and developers who can find fast answers to your questions. For an IBM authorized dealer near you, or to order OS/2 2.0 from IBM, call 1 800 3-IBM-OS2*.



- OS/2 Crash Protection helps shield applications from each other.
- The integrating platform of choice for DOS, Windows and OS/2.
- Preemptive multitasking for responsive, reliable execution.
- 32-bit flat address space for productive programming.
- A full range of IBM services and support.

The classic IBM logo, consisting of eight horizontal blue stripes of equal width and height, with the letters "IBM" in a bold, sans-serif font to the right.

OS/2 2.0:

A Development Platform

by Geno Coschi

True 32-bit Operating System

OS/2 2.0 is a true 32-bit operating system for IBM PCs and compatibles. This means that both the operating system and application programs can exploit the memory and speed advantages of 32-bit architecture. OS/2 provides application programs with a contiguous, flat 32-bit virtual address space of up to 512Mb. Developers are free from the complexities of 16-bit segmented architecture. The result is that applications are simpler to write and there is no 640K memory limitation. Furthermore, programs run considerably faster and porting code from other 32-bit platforms is significantly easier.

Multitasking for Productivity

Another feature of OS/2 that strengthens its use as a development platform is its ability to multitask which allows you to have OS/2 do more than one thing at a time. For example, you can initiate a compile of a set of source files in one session and then go on and do other things such as editing in another session, while the compiles are running.

Multiple Execution Environments

In addition to executing native 32-bit OS/2 applications, OS/2 2.0 can also execute 32-bit DOS and Windows applications and 16-bit OS/2 1.x, DOS and Windows applications. This multi-platform capability provides the developer with a wide range of target operating environments for which he can develop and test under OS/2 2.0.

WATCOM Development Tools: The Widest Range of Target Environments

For OS/2 2.0 to be used as a development platform for OS/2, DOS and Windows applications, development tools are required which exploit the multi-target capabilities of OS/2 2.0. The WATCOM C/386 and FORTRAN 77/386 32-bit development tools are unique in this way. These packages include versions of the compiler and tools for OS/2 and DOS, so that you can develop your applications from an OS/2 or DOS session. Development tools include a compiler, linker, debugger, profiler, make, librarian and disassembler. Also included in the products are 32-bit run-time libraries for OS/2, DOS, and Windows.

Multi-target Linking and Debugging

The WATCOM linker is a key component whose features include the ability to generate many executable file formats, including those used by the 16 and 32-bit OS/2, DOS and Windows operating systems. This unique feature allows the application developer to use OS/2 2.0 as a platform for creating 16 and 32-bit OS/2, DOS and Windows executable files. To complete the development cycle, it must be possible to run and debug these applications. OS/2 2.0 can execute 16 and 32-bit OS/2, DOS and Windows applications. The WATCOM debugger, VIDEO, takes full advantage of this, and can actually debug 16-bit OS/2, DOS and Windows applications as well as 32-bit OS/2 and DOS applications. In fact, it is possible to run VIDEO in an OS/2 session to debug a DOS application running in a DOS session.

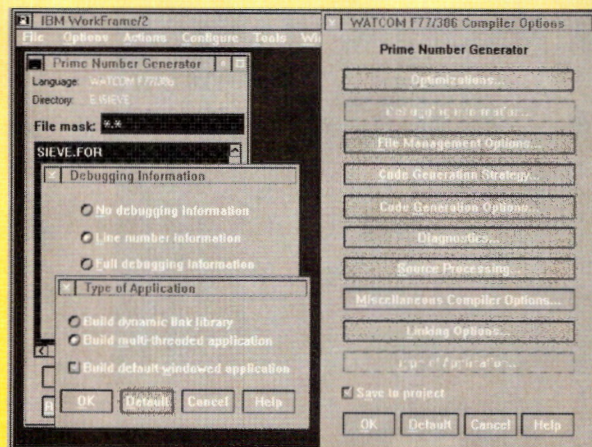
Remote Debugging with VIDEO

An important feature of VIDEO is its remote debugging capability. This allows the use of OS/2 as a debugging host environment from which you can remotely debug applications running on other target environments. For example, WATCOM C/386 supports debugging PenPoint applications that run under GO Corporation's PenPoint operating system. VIDEO, running in an OS/2 session, can debug PenPoint applications by communicating via the parallel port with the machine running the PenPoint application. Similarly, on a Novell network, VIDEO can use the network to debug remote applications on other machines.

WorkFrame/2 Enabled

IBM has developed an integrated development environment (IDE) for OS/2 called WorkFrame/2. WorkFrame/2 allows application developers to create a development environment to suit their requirements and is intended to provide software developers with a consistent user interface for using application development tools. The WATCOM C/386 and FORTRAN 77/386 compilers have been integrated into WorkFrame/2. This integration includes the ability to invoke WATCOM's compilers,

linker, make utility and debugger from within WorkFrame/2. In addition, dialogs are provided that allow the user, for example, to easily specify compiler options. Source code errors detected during compilation are easily corrected by simply clicking on an error message displayed in the output window. This invokes the PM editor and highlights the line to which the error applies.



WATCOM C/386 and FORTRAN 77/386 are integrated with the WorkFrame/2 environment.

Although integrated into WorkFrame/2, the user has the option of invoking the compiler and other tools from the command line from an OS/2 or DOS session. For simplicity, the following examples use the command line approach.

A FORTRAN 77 Example

In order to demonstrate the ability to use OS/2 as a platform to develop applications for multiple target environments, the following example will show the steps required to develop a FORTRAN 77 program that will be targeted for 32-bit OS/2, DOS and Windows. The FORTRAN 77 example will be a program that uses the Sieve of Eratosthenes algorithm to compute prime numbers.

- * This program computes the prime numbers between 1 and 10000
- * using the Sieve of Eratosthenes algorithm.

```

IMPLICIT NONE
INTEGER UBOUND
PARAMETER (UBOUND=10000)
INTEGER I, K, PRIMES
LOGICAL*1 NUMBERS(2:UBOUND)
CHARACTER*11 FORM
PARAMETER (FORM='(A,I5,A,I5)')
DO I = 2, UBOUND
    NUMBERS(I) = .TRUE.
ENDDO
PRIMES = 0
DO I = 2, UBOUND
    IF( NUMBERS( I ) )THEN
        PRIMES = PRIMES + 1
        DO K = I + I, UBOUND, I
            NUMBERS( K ) = .FALSE.
        ENDDO
    ENDF
ENDDO
PRINT FORM, 'The Number of Primes between 1 and ', UBOUND,
1      ' are: ', PRIMES
END

```

Assuming this program is contained in the file sieve.for, the following command will compile the program.

```
[C:\]wfc386 sieve
```

The following linker command creates an executable file for the sieve program that can then be executed in an OS/2 session.

```
[C:\]wlink system os2v2 file sieve
```

The system linker directive allows the user to specify in which environment the application will run. Each system name has a number of linker directives associated with it that, for example, identify the format of the executable file to be generated and the run-time libraries to be used to resolve undefined references. There are a number of predefined system names. In the above example, the predefined system name os2v2 is specified to generate an OS/2 2.0 executable file.

In order to link the program to run under DOS, all that we require is to specify a different system name. This is achieved by issuing the following linker command.

```
[C:\]wlink system dos4g file sieve
```

Notice that the system name specified in the system linker directive is dos4g. This system name selects a new set of run-time libraries and generates an executable file that can be run using Rational Systems' DOS/4GW DOS extender. This DOS extender is part of the FORTRAN 77/386 application development package.

Finally, the following commands create a 32-bit Windows version of the same program.

```

[C:\]wlink system win386 file sieve
[C:\]wbind -n sieve

```

Notice once again that the system name in the system linker directive has changed to specify the format of the executable file and the run-time libraries to be used. An additional step is required to bind the 32-bit Windows supervisor with the program so that it can execute as a 32-bit application. The program can now execute in an WIN-OS/2 session.

A Presentation Manager Application in C

The following example demonstrates the steps required to compile and link an OS/2 Presentation Manager application written in C programming language. The program continuously draws random shapes.

```

#include <stdlib.h>
#define INCL_WIN
#define INCL_GPI
#include <os2.h>

int SizeX;
int SizeY;
HWND hWnd;
HWND WinHandle;
HMQ hMessageQueue;
HAB AnchorBlock;
MRESULT EXPENTRY MainDriver( HWND hWnd, USHORT msg,
MPARAM mp1, MPARAM mp2 )
{
    HPS ps;
    RECTL rcl;

    switch( msg ) {
    case WM_CREATE:
        WinHandle = hWnd;
        WinStartTimer( AnchorBlock, WinHandle, 1, 150 );
        break;
    case WM_TIMER:
        DrawEllipse();
        return( 0 );
    case WM_SIZE:
        SizeX = SHORT1FROMMP( mp2 );
        SizeY = SHORT2FROMMP( mp2 );
        return( 0 );
    case WM_PAINT:
        ps = WinBeginPaint( WinHandle, NULL, NULL );
        WinQueryWindowRect( WinHandle, &rcl );
        WinFillRect( ps, &rcl, CLR_WHITE );
        WinEndPaint( ps );
        return( 0 );
    }
    return( WinDefWindowProc( WinHandle, msg, mp1, mp2 ) );
}

int main()
{
    ULONG style;
    QMSG qmsg;

    AnchorBlock = WinInitialize( 0 );
    if( AnchorBlock == 0 ) return( 0 );
    hMessageQueue = WinCreateMsgQueue( AnchorBlock, 0 );
    if( hMessageQueue == 0 ) return( 0 );
    if( !WinRegisterClass( AnchorBlock, "WATCOM", (PFNWP)MainDriver,
        CS_SIZESEIWM, 0 ) ) return( 0 );
    style = FCF_TITLEBAR | FCF_SYSMENU | FCF_SIZEBORDER
        | FCF_MINMAX | FCF_SHELLPOSITION | FCF_TASKLIST;
    FrameHandle = WinCreateStdWindow( HWND_DESKTOP, WS_VISIBLE,
        &style, "WATCOM", "", 0,
        NULL, 0, &WinHandle );
    if( FrameHandle == 0 ) return( 0 );
    while( WinGetMsg( AnchorBlock, &qmsg, NULL, 0, 0 ) ) {
        WinDispatchMsg( AnchorBlock, &qmsg );
    }
    WinDestroyWindow( FrameHandle );
    WinDestroyMsgQueue( hMessageQueue );
    WinTerminate( AnchorBlock );
    return( 1 );
}

static int Random( int high )
{
    return( ( (double)rand() / 32767 ) * high );
}

static void NewColor( HPS ps )
{
    QpiSetColor( ps, Random( 15 ) + 1 );
}

static void DrawEllipse()
{
    POINTL ptl;
    HPS ps;
    static int Odd = 0;
    int parm1, parm2;

    ps = WinGetPS( WinHandle );
    ptl.x = Random( SizeX );
    ptl.y = Random( SizeY );

```



```

GpiMove( ps, &ptl );
ptl.x = Random( SizeX );
ptl.y = Random( SizeY );
parm1 = Random( 50 );
parm2 = Random( 50 );
if( Random( 10 ) >= 5 ) {
    NewColor( ps );
    GpiBox( ps, DRO_FILL, &ptl, 0, 0 );
    NewColor( ps );
    GpiBox( ps, DRO_OUTLINE, &ptl, 0, 0 );
} else {
    NewColor( ps );
    GpiBox( ps, DRO_FILL, &ptl, parm1, parm2 );
    NewColor( ps );
    GpiBox( ps, DRO_OUTLINE, &ptl, parm1, parm2 );
}
Odd++;
Odd %= 1;
WinReleasePS( ps );
}

```

Assuming this program is contained in the file `pmdemo.c`, the following command can be used to compile the program.

```
[C:\]wcc386 pmdemo
```

The following linker command links the program as a Presentation Manager application that is to run under OS/2 2.0.

```
[C:\]wlink system os2v2 pm file pmdemo
```

The program can now be run in an OS/2 session.


Notice that in addition to specifying the `os2v2` system name in the system linker directive, the `pm` directive must be used to indicate that the executable file is to be marked as a Presentation Manager application.

Summary

OS/2 2.0 is a 32-bit operating system that provides an excellent environment for application development, particularly with WATCOM's 32-bit multi-target compilers.

OS/2 2.0, together with WATCOM's 32-bit compilers, delivers several important advantages for developers over traditional 16-bit environments and tools. Using the capabilities of Intel's 32-bit x86 processors, programs run much faster: typically a 2-3 times computation speedup. Perhaps more importantly, the 32-bit programs can directly use many megabytes of memory and are not restricted by the 640k barrier. Programs are also simpler to write since the complications of the 16-bit segmented architecture can be forgotten.

With OS/2's multiple execution environments, WATCOM's tools deliver these 32-bit benefits for DOS, Windows and OS/2 2.0 development. The multitasking capabilities of OS/2 and the WorkFrame/2 environment further enhance developer productivity. The WATCOM C/386 and FORTRAN 77/386 development tools exploit many of the features of OS/2.0 to provide developers with the best optimizing compilers for the widest range of target environments.



Gpf
SYSTEMS, INC.


Let Gpf write the GUI you design

Using the powerful point and click visual programming environment of Gpf*, you can prototype, test and generate a complete OS/2 PM GUI in a few hours or days rather than the weeks or months required to hand code the same design. Gpf then generates error free ANSI C complete with embedded SQL statements.

Gpf keeps the entire design definition in one file. This means single point maintenance for easy update and archiving. From this file Gpf generates the C source file as well as .H, .RC, .IPF, DEF, .IDS, .MAK, etc.

Gpf supports:

- Simple and direct linkage of built in or user defined functions.
- Direct creation and association of help screens.
- Flexible use of Presentation objects fonts, colors, etc.
- Automatic embedded SQL statements to read OS/2 DataBase Manager tables.
- Multi-thread programming.
- Multiple source file generation.
- Controls that automatically scale with window size.
- Inclusion of user defined controls.



Call Gpf Systems Inc. at
(203) 873-3300 or (800) 831-0017 - fax (203) 873-3302. Free demo software available
P.O. Box 414, 30 Falls Rd., Moodus, CT 06469

* GUI Programming Facility

OS/2 DEVELOPMENT SOFTWARE

ASSEMBLY LANGUAGE

	LIST OURS
IBM Macro Assembler	288 ... 259

AWK LANGUAGE

MKS AWK by Morte Kern Systems	179 ... 149
MKS AWK by Morte Kern Systems	199 ... 165
Thompson AWK Compiler	299 ... 269
Thompson AWK Compiler by Thompson Automation	249 ... 224
Thompson Toolkit & AWK	449 ... 404
Thompson Toolkit & AWK by Thompson Automation	349 ... 314

BASIC LANGUAGE

ObjectView PM Basic	899 ... 809
---------------------------	-------------

C LANGUAGE

COMPILERS

IBM C Developer's WorkSet/2 kit	895 ... 369
IBM C Set/2	696 ... 626
IBM C/2 Compiler	671 ... 604
TopSpeed C by Clarion	99 ... 89
TopSpeed C Pro by Clarion	297 ... 267
TopSpeed C Standard by Clarion	198 ... 178
WATCOM C/386 9.0 by WATCOM	895 ... 599
WATCOM C 9.0	495 ... 435

CODE GENERATORS

Toolbook by Asymetrix	395 ... 345
WindowsMAKER Prof. by Blue Sky	CALL ... CALL

FILE MANAGERS

AccSys for dBASE by Copia International	395 ... 356
AccSys for Paradox	395 ... 356
Btrieve 5.10 by Novell	595 ... 399
c-tree Plus by FairCom	595 ... 476
Code Base 4.5 by Sequiter Software	395 ... 295

LEX & YACC

MKS LEX & YACC by Morte Kern	299 ... 245
MKS LEX & YACC by Morte Kern	349 ... 285
ObjectView PM C	995 ... 896
PCYACC by Abraxas Software	695 ... 660

LINT UTILITIES

PC-lint by Gimpel	139 ... 95
-------------------------	------------

SCREENS/GUI

C-Scape with Look & Feel 3.2 by Liant Software	499 ... 425
DbxSHIELD by Stirling Group	595 ... 535

	LIST OURS
Greenleaf DataWindows	495 ... 421
Instant Windows by Winsoft	995 ... 896
MEWEL Window System by Magma	595 ... 536
Panel Plus II 2.2 by Roundhill	595 ... 536
TbxSHIELD by The Stirling Group	295 ... 266
Vermont Views w/source by Vermont Creative	495 ... 415
Vermont Views w/source by Vermont Creative	890 ... 765
WinPro PM by Xian	395 ... 356

C++ LANGUAGE

COMPILERS

TopSpeed C++ by Clarion	99 ... 89
TopSpeed C++ Pro by Clarion	297 ... 267
TopSpeed C++ Standard by Clarion	198 ... 178

CLASS LIBRARIES

C++/Views by Liant Software	495 ... 421
Greenleaf Comm++ 1.0	199 ... 169
M++ Scientific by Dyad	295 ... 266
ObjectPM by Objective Solutions	499 ... 439

COBOL

COMPILERS

CA-Realia COBOL 4.0 by Computer Associates	995 ... 896
Micro Focus Professional COBOL	1250 ... 1125
Microsoft COBOL	1250 ... 881

DATABASE

DATABASE MANAGEMENT SYSTEMS

Paradox by Borland	725 ... 544
--------------------------	-------------

CODE GENERATORS

DBAPrep by N Systems	395 ... 345
----------------------------	-------------

FILE MANAGERS

Btrieve 5.10 by Novell	595 ... 399
Code Base 4.5 by Sequiter Software	395 ... 295
SoftC Database Library	195 ... 176

LIBRARIES

Q+E Database Library (QELIB) by Pioneer	399 ... 359
---	-------------

ADDITIONAL PRODUCTS

Q+E. Server Database Edition by Pioneer	299 ... 269
Q+E. Standard Edition by Pioneer	199 ... 179
ERwin/DBF by LogicWorks	795 ... 716
ERwin/ERX	2495 ... 2246
ERwin/SQL	1295 ... 1166

DEBUGGERS

	LIST OURS
MultiScope OS/2 Debugger by Symantec	495 ... CALL
Periscope/Remote for OS/2 (V.I.X)	195 ... 176
Periscope/32 for OS/2 by Periscope	445 ... 401

DOCUMENTATION

Source Print Deluxe by Powerline	249 ... 215
Source Print+	169 ... 145

EDITORS

BRIEF by Borland	249 ... 95
EDIX for DOS & OS/2 by Emerging Technology	295 ... 266
KEDIT for DOS and OS/2 by Mansfield	175 ... 157
MKS Vi (DOS & OS/2) by Morte Kern Systems	229 ... 189
MKS Vi (OS/2) by Morte Kern Systems	199 ... 165
Slick Editor by Micro Edge	195 ... 149
SourceLink (OS/2) by SourceLine Software	249 ... 215
SPF/2 (DOS & OS/2) by CommandTech	295 ... 266

FORTRAN

IBM Fortran/2 OS/2	761 ... 685
WATCOM FORTRAN 77 /386 9.0	895 ... 719
WATCOM FORTRAN 77 9.0	495 ... 435

LINKERS

OPTLINK/2 by SLR	350 ... 315
------------------------	-------------

OPERATING SYSTEM/ENVIRONMENT SUPPORT

Extended Services for OS/2 2.0 by IBM	595 ... 536
Extended Services w/Database Server	1995 ... 1796
IBM OS/2 2.0	195 ... 149
IBM WorkFrame/2	90 ... 81
ResourceSHIELD by Stirling Software	295 ... 266

PROTOTYPING

DemoSHIELD (OS/2)	595 ... 536
Instant Prototyper for OS/2 by Winsoft	395 ... 356

SMALLTALK LANGUAGE

Smalltalk/V PM by Digital	500 ... 395
Smalltalk/V PM Relational Database Interface	995 ... 795

SOURCE MANAGEMENT

codan by Implements	395 ... 359
MKS Make (DOS & OS/2)	299 ... 245
MKS Make (OS/2)	249 ... 205
MKS Programming Platform (DOS & OS/2)	1149 ... 925
MKS Programming Platform (OS/2)	995 ... 802
MKS RCS (DOS & OS/2)	399 ... 325
MKS RCS (OS/2)	349 ... 285
MKS Software Management Team (DOS & OS/2)	449 ... 365

SORTING

Opt-Tech Sort-OS/2 by Opt-Tech DP	249 ... 224
---	-------------

TESTING TOOLS

CPU Monitor by BonAmi	149 ... 134
SQA:Replay by Software Quality Animation	99 ... 89
SQA:Robot for OS/2 by Software Quality Automation	995 ... 899

ADDITIONAL LANGUAGES/PRODUCTS

Command Line by Soft & GUI	40 ... 36
C-DOC 5.0 Professional Documentation Tools	299 ... 269
Formatted Entryfields by Software Engineering Intl.	329 ... 296
GammaTech Utilities for OS/2	125 ... 113
GPF Programming GUI Programming Facility by GPF	995 ... 845
IBM Developer's Toolkit for OS/2 2.0	119 ... 107
IBM Developer's Workbench for OS/2 2.0 kit	199 ... 179
IBM Technical Library	299 ... 269
Instant Prototyper for OS/2 by Winsoft	395 ... 356
JetForm Design	495 ... 445
LogSHIELD for OS/2 by The Stirling Group	595 ... 536
MemSHIELD (OS/2) by The Stirling Group	595 ... 536
MKS AWK (OS/2) by Morte Kern Systems	179 ... 149
MKS AWK (DOS & OS/2) by Morte Kern Systems	199 ... 165
MKS Toolkit (DOS & OS/2) by Morte Kern Systems	399 ... 325
MKS Toolkit (OS/2) by Morte Kern Systems	349 ... 285
ObjectPM by Raleigh Systems, Inc.	495 ... 439
ObjectVision for OS/2 2.0 by Borland	250 ... 188
OS/2 PM Switch-It™ Code Generation Module	495 ... 445
Personal REXX for OS/2 by Quercus Systems	175 ... 158
ResourceSHIELD 2.0 by The Stirling Group	295 ... 266
Server for OS/2 by JetForm Corporation	1695 ... 1439
Spinner PLUS (OS/2) by Spinner	495 ... 446
TCXL-OS/2 by Innovative Data Concepts	295 ... 266
TbxSHIELD (OS/2) by The Stirling Group	295 ... 266
Thompson AWK Compiler (DOS & OS/2) by	299 ... 269
Thompson Toolkit & AWK (DOS & OS/2)	449 ... 404
Thompson Toolkit (DOS & OS/2)	199 ... 179

Alphabetical Product Index

Page 171-175

**CPU
MONITOR™
BOOSTS
OS/2
TO THE
MAX**

CPU Monitor™ gives a real-time boost to your OS/2 1.2, 1.3, and 2.0 environment. With CPU Monitor, you can display statistical data for all processes, threads and estimated CPU utilization; detect and stop

invisible, runaway, and background programs; suspend and resume threads, and dynamically change thread priorities for any of your Presentation Manager applications. You can tailor the displays exactly to your liking, since CPU Monitor's displays are fully configurable.

For a limited time, CPU Monitor is only

\$149.95

Start getting maximum performance out of OS/2. Order CPU Monitor today!

**BonAmi
Software Corp.**

60 Thoreau Street
Suite 219
Concord, MA 01742
(508) 371-1997

No Matter What Your GUI Destination

CASEWORKS

Can Take You There



Now You Don't Have to Worry About Choosing the Wrong GUI Development Path...CASEWORKS Lets You Easily Change Direction — by Switching Languages or Platforms — Without Wasting Any Time!

All of the choices surrounding Graphical User Interfaces (GUIs) can make picking a GUI development path seem impossible. Deciding between Windows™ or Presentation Manager™ (PM) is only the first step. You need a tool that lets you generate code to Windows or PM for a variety of languages and APIs, and that lets you migrate interfaces among languages and platforms if you change your mind. *CASE:W™ and CASE:PM™ are the only tools that give you that flexibility.*

CASE:W for Windows Development

Windows developers face the challenge of migrating from C to C++ and class library programming. CASE:W makes it easy by generating source code for the three "standards" of Windows programming: the Windows C API, Microsoft Foundation Classes™ and Borland's ObjectWindows™.

Simply buy CASE:W along with a "Knowledgebase" for C, or C++ and a class library. Use the visual designer to create and test your interface. Then generate expert-level, tightly-written, thoroughly-documented code from the knowledgebase you've chosen. If you want to use your interface in a different environment, simply buy that knowledgebase and generate again. No rewriting code,

no learning new APIs and class libraries, no wasting time. You can even migrate the interface to PM.

CASE:PM for Presentation Manager Development

When you're developing "mission-critical" applications for OS/2™, you need a strategic tool that can build PM applications for both 16- and 32-bit PM environments. Our new CASE:PM Workbench tool builds applications that leverage IBM's new CUA '91 interface guidelines.

The Safest Development Route

With CASEWORKS, you get the security of using the leading GUI development tools. Microsoft® includes a version of CASE:W with its QuickC™ for Windows, and more corporations use CASE:PM for developing strategic PM applications than any other 3GL tool. Both tools generate code without restrictions, letting you add any code, anywhere. Plus, a regeneration facility preserves your changes. And you control the generated code, with no proprietary languages, runtimes or licensing fees.

Don't avoid making a decision because you're uncertain which way to go. Choose the only company that can take you to Windows or PM, through any development route, without wasting time, money or development resources: CASEWORKS.

CASEWORKS™

1 Dunwoody Park, Suite 130, Atlanta, GA 30338
1-800-635-1577 • (404) 399-6236 • Fax (404) 399-9516

WINDOWS DEVELOPMENT SOFTWARE

BASIC LANGUAGE

LIST OURS

COMPILERS

GFA BASIC for Windows by GFA Software Tech.	295	235
GFA BASIC "QB"	99	90
Microsoft Visual Basic	199	139
Microsoft Visual Basic & Professional Toolkit	495	337
Realizer by Computer Associates	CALL	CALL

COMMUNICATIONS LIBRARIES

P.D.Q. COMM for Windows by Crescent Software	99	89
VB Comm Library by MicroHelp	149	134

DATABASE

DATABasic 1.01 by Blue Rose	249	224
Q+E Database/VB (QEV) by Pioneer	199	169
Q+E Standard Edition for Windows by Pioneer	199	179
PowerLib W by ETN	295	266

LIBRARIES

AGILITY/VB by Apex Software	189	89
DAZZLE/VB by TeraTech	299	269
Professional	499	425
Financial Library/VB by TeraTech	299	269
MicroHelp VB Network Library	99	89
ProMath/VB 1.0 by Tera Tech	125	113
QuickPak Prof. for Windows by Crescent Software	199	179
VB Muscle by MicroHelp	189	170
VB Tools by MicroHelp	189	170
VBLib by Tera Tech	125	113
Visual/db by AJS	149	134
Visual Librarian by Software Interphase	99	89
Microsoft Visual Basic Professional Toolkit	299	CALL

ADDITIONAL PRODUCTS

MicroHelp VBX Reference Utilities	99	89
VB XREF by MicroHelp	99	89
VBFX by Akros Inc.	129	116
Visual Interface by Pinnacle	299	269

C LANGUAGE

COMPILERS

Borland C++ by Borland	495	319
Borland C++ & App Frameworks	749	549
High C/C++ for Ext. DOS 80386-486 by MetaWare	795	669
Intel 386/486 C Code Builder	695	575
Microsoft C/C++ 7.0	499	309
Microsoft QuickC for Windows	199	139
TopSpeed C Pro by Clarion	297	267
Turbo C++ for Windows by Borland	150	113
WATCOM C/386 9.0	895	599
WATCOM C 9.0	495	435

COMMUNICATIONS LIBRARIES

CrystalComm for Windows by Crystal	175	169
CrystalComm for Windows w/source by Crystal	350	315

CODE GENERATORS

Asymetrix ToolBook Multimedia Resource Kit	300	CALL
CASE:W Corporate by Caseworks	1485	895
Dialog Coder by Software Organization	499	CALL
Poet/Windows by BKS Software	499	449
ProtoGen by ProtoView Development	199	99
Toolbook by Asymetrix	395	345
WindowsMAKER by Blue Sky	795	716
WindowsMaker Professional by Blue Sky	995	895
WindowsMAKER Professional for 32-bit code	995	895
WinGen by Buzzwords	150	129

DATABASE LIBRARIES

C Data Manager for Windows by Database Tech.	895	806
DataLib/Windows by Dattell Communication Sys	395	356
DBAPrep by NSystems	395	335
SoftC Database Library	195	176

FILE MANAGEMENT

Btrieve for Windows by Novell	595	399
DBAPrep by NSystems	395	335
Essential B-Tree for Windows	499	449
FABS Plus for Windows by Computer Control	195	176

ADDITIONAL PRODUCTS

Control Palette for Windows by Blaise	169	152
KnowledgePro Windows by Knowledge Garden	249	224
KnowledgePro Windows Gold	549	494
MetaWare Windows Apps Dev. Kit	395	356

C++ LANGUAGE

COMPILERS

Borland C++ & App Frameworks	749	549
Borland C++ by Borland	495	319
High C/C++ for Ext. DOS 80386-486 by MetaWare	795	669
Microsoft C/C++ 7.0	499	309
TopSpeed C++ Pro by Clarion	297	267
Zortech C++ Competitive Upgrade by Symantec	199	189
Zortech C++ S & E Edition 3.0	999	693
Zortech C++ with Video by Symantec	449	379

CLASS LIBRARIES

C++/Views by Liant Software	495	421
Poet/Windows by BKS Software	499	449
Style by Software Ingenuities	250	199
Win++ by Blaise Computing	289	231
zApp for Windows w/source by Inmark Dev.	295	266

COBOL

COMPILERS

Micro Focus Professional COBOL	1250	1125
Microsoft COBOL	1250	881

INTEGRATE MULTIMEDIA IN NEW OR EXISTING WINDOWS APPLICATIONS



MEDIA DEVELOPER™

Multimedia Application Development Engine

Integrate video, animation, audio, graphics and documents in your Windows applications.

Build your multimedia applications with any development environment that supports Dynamic Link Libraries (DLL).

Lenel's MediaDeveloper provides a complete library of programming objects for full multimedia integration, including:

- ▶ **Compatibility with any application development environment that supports DLLs** including Visual Basic, Object Vision, Realizer, ToolBook, etc.
- ▶ **Media Control Interface (MCI) engine for control of leading consumer and commercial peripheral devices** including a wide variety of: laser disc players; video decks; CD-ROM and hard disk drives; video-in-a-window, and audio/video compression boards; and Sony VISCA-compatible devices
- ▶ **Full-featured, integrated multimedia database server** for complete organization and retrieval of animation, audio, video, graphic and document objects, including the ability to change the multimedia objects used in applications without re-programming
- ▶ **Support of a broad range of industry-leading file formats** including animation, audio, video, graphic and document files from a variety of storage media including videotapes and laser discs

With one interface to all these features, and full control over display window size and position, MediaDeveloper lets you concentrate on application content while adding multimedia for greater user impact. All using your favorite application development environment.

Strategic relationships with leading multimedia companies such as Sony, Microsoft, Intel, Truevision and Panasonic enable Lenel to develop the most advanced multimedia software available.

So get MediaDeveloper and add the impact of sound and motion to your Windows application. From Lenel Systems International—the single solution to multimedia productivity.

Contact Programmer's Paradise at 1-800-445-7899.

LENEL

LENEL SYSTEMS INTERNATIONAL, INC.

19 Tobey Village Office Park • Pittsford, NY 14534-1763
Phone: 716-248-9720 Fax: 716-248-9185

WINDOWS DEVELOPMENT SOFTWARE

DATABASE

ACEFILE for Windows by ACE Software Corporation	199	149
DataTable by ProtoView Development Co.	249	215
DBAPrep by N Systems	395	335
Corporate Vision by IntelligencWare	690	621
dBFast by Computer Associates	550	395
ERwin/ERX by Logic Works	2495	2245
ERwin/SOL by Logic Works	1295	1165
Iconic Query by IntelligencWare	290	259
IDIS: The Information Discovery System	790	709
ORIN for Windows 2.4 by Objective Solutions	1295	1166
Q+E Standard Edition for Windows by Pioneer	199	169
Q+E Server Database Edit, for Windows by Pioneer	299	269
Quadbase-SQL for Windows	595	536
Superbase 4 by Software Publishing	695	543
Superbase 4 Developer's Edit, by Software Pub	1195	933

DEBUGGERS

MultiScope Debugger for Windows by Symantec	379	CALL
Periscope/32 for Windows	395	356

DOCUMENTATION

ABC Flowchart by Micrografix	SPECIAL 1/2 OFF!	295	149
ADS Diagrammer 2.0 by Atlantic Design Systems		250	215
C-DOC 5.0 Professional Documentation Tools		299	269
MetaDesign by Meta Software		350	299
RFFlow by RFF Electronics		129	116
Source Print Deluxe by Powerline		249	215
Source Print+ by Powerline		169	145

EDITORS

CodePad Editor 1.0 by Cognetic	99	89
CodeWright by Premia	249	225
ED for Windows by Lifeboat Software	269	199
EditPro by EditPro Corporation	99	90
EXSYS Professional for Windows	1295	1166
Persona for Windows by InnoVision Software, Inc.	120	109
SlickEdit by MicroEdge	195	149
Speed Edit for Windows by Bradford	295	266
TE Developer Kit v3.0 for DOS by Sub Systems	169	152
TE Developer Kit v3.0 for Windows	269	242
TE Developer Kit v3.5 for Windows	269	242

FAX

FactslinkPRO by Voicelink Inc.	895	759
FaxRight by Management Info. Syst.	149	129

FORMS

Design/Windows by JetForm	495	420
E-Mail/G Windows/New Wave/cc:Mail/MS Mail	495	420
Filler/G	129	115
Merge-Windows/DDE	199	169
Server for DOS LAN	1195	1015
Sigma NetBIOS Engine by Sigma Software Research	155	139

FORTRAN LANGUAGE

Microsoft FORTRAN 5.0	495	349
WATCOM FORTRAN 77/386 9.0	895	719
WATCOM FORTRAN 77 9.0	495	435

GRAPHICS

Essential Graphics Chart for Windows V1.0 by South Mountain Software	CALL	CALL
Graphics Server SDK by Pinnacle	495	445
HALO Desktop Imager by Media Cybernetics	139	89
HALO F/X	199	179
Image SDK Plus by Black Ice Software, Inc.	300	269
Imaging Objects w/source 2.0 by Quinn Comm.	349	314
LEAD TOOLS 32	995	845
ObjectGraphics for C++ by Symantec	195	140
ObjectGraphics for Pascal by Symantec	195	140
PCX SDK for Windows by Black Ice Software, Inc.	150	135
PCX Toolkit for Windows by Genus	249	224
w/source	599	539
Targa SDK for Windows by Black Ice Software, Inc.	199	179
TIFF SDK for Windows	300	270

GUI'S

Button Tool & Edit Tool Bundle by OutRider Systems	90	81
Control Palette for Windows by Blaise	169	152
DbxSHIELD by The Stirling Group	395	345
MAGIC FIELDS by Blue Sky Software	495	446
TbxSHIELD by The Stirling Group	295	266
zApp for DOS/Windows w/source by Inmark Devel.	495	446
zApp for Windows w/source by Inmark Dev.	295	266
Zinc Interface Library for DOS & Windows	400	360
Zinc Interface Library for DOS & Windows w/source	500	450

HELP AUTHORIZING TOOLS

RoboHelp by Blue Sky	495	446
Windows Help Magician by Software Interphase	199	169

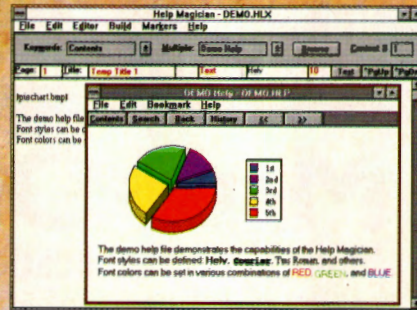
LINKERS

OPTLINK/Windows 2.5 by SLR	499	449
VMDData for Windows by PocketSoft	495	445

MULTIMEDIA

MediaDeveloper by LENEL Systems	595	509
MediaOrganizer by LENEL Systems	495	419

Windows Help Files So easy - it's Magic!



The Windows Help Magician saves you countless hours creating custom help files, for Microsoft Windows applications.

Forget about the cumbersome footnote way of creating help with Microsoft Word. Use this tool to create help files in a single, integrated environment. No need to switch out to DOS to run the Help Compiler. With the Magician you'll be able to write the RTF file *instantaneously*. And you can even import RTF files from manuals written in Microsoft Word.

Highlights:

- Fully functional familiar editor with all the amenities
- Create jumps and popups simply by marking a word or a phrase
- Include bitmaps and hot spots
- Create browse sequences easily
- Use different fonts and colors for help type
- Import and Export RTF and ASCII files
- Very FAST in generating RTF files!
- Test your help file *instantaneously* while inside the Help Magician
- Works with all Windows languages
- Supports Windows 3.0 and 3.1

Only \$199 - Order Now!
(800) 542-2742

**SOFTWARE
INTERPHASE
INCORPORATED**

82 Cucumber Hill Road
Foster, RI 02825-1212
Fax: (401) 397-6814



The MultiPlatform Editor

Call for details & specifications

Mouse support now available on DOS,
OS/2, and Windows NT!

Emulates BRIEF & Epsilon

If you are using Windows NT,
NOW is the time to order
SlickEdit.

"If it's features and ease of use you want —
even if you're not a programmer — SlickEdit
is our preferred choice."

—Rick Farris
UnixWorld, February 1992

"MicroEdge's SlickEdit was, overall, the
easiest editor to learn and use."

—Julian Milenbach
PC Week September 30, 1991

"When it comes to programmer's text
editors, SlickEdit lives up to its name."

—Namir Clement Shammass
BYTE, December 1988

PRICES

Single User License

MS Windows
NT 386 \$195

MS Windows
NT mips \$195

Bundle
DOS/ OS/2 \$195

UNIX/XENIX \$295

CPU License

UNIX/XENIX \$425

SUN \$425

IBM

AIX RS 6000 \$425

Motorola 88K \$425

DG Avion \$425

Silicon Graphics \$425

HP9000 \$425

EPIX \$425

SEQUENT

Dynix/ptx \$425

Plus \$6

shipping & handling

SPECIFY DISK SIZE

microEdge, Inc.

P.O. Box 18038

Raleigh, NC 27619-8038

Phone: 919-831-0662 • Fax: 919-831-0101

BRIEF, Epsilon, & UNIX are trademarks of their respective manufacturers.

Make the move to Windows 3.1 without skipping a beat

Upgrading to Microsoft Windows 3.1: Video Training for Support Professionals

Microsoft® Windows™ operating system version 3.1 is here, with more than 1000 improvements that make using a PC easier. Now you're responsible for implementing this software upgrade across your organization—smoothly and quickly. It's also up to you to provide the ongoing, effective support that will help your organization maximize the many benefits of Windows 3.1. To do all this and do it well, you need the inside track. The *Upgrading to Microsoft Windows 3.1* video course from Microsoft University can give you that inside track and help you make the transition—smoothly and quickly.

Get up to speed quickly

Building on the knowledge and expertise you gained working with Windows 3.0, this fast-paced video course focuses on what's new in version 3.1. You'll get hands-on experience with object linking and embedding (OLE), TrueType® fonts, the .INI and .INF files, and other enhancements. Upon completion of the course you'll be able to:

- ▲ Install Windows 3.1 on standalone or networked systems
- ▲ Automate Windows 3.1 setup over a network
- ▲ Optimize Windows 3.1 to run efficiently in your PC environment
- ▲ Customize Windows 3.1 to meet your organization's needs
- ▲ Troubleshoot common Windows 3.1 problems encountered by end users

Advanced hands-on training

In just 8 to 10 hours of self-paced study, you'll acquire the technical skills you need to upgrade your organization to Windows 3.1. The video course visually illustrates concepts and techniques through demonstrations and 3-D animation. A detailed student guide provides in-depth reference information, and lab exercises give you the opportunity to apply new knowledge and gain hands-on experience immediately.

Course Outline

- Module 1: Getting Started*
- Module 2: Program Manager and File Manager*
- Module 3: Control Panel, PIF Editor, and Accessories*
- Module 4: Object Linking and Embedding*
- Module 5: Customizing Windows 3.1 Setup*
- Module 6: Automating Windows 3.1 Setup*
- Module 7: Tuning the .INI Files*
- Module 8: Troubleshooting Windows 3.1*

**Bring the Microsoft University
classroom in-house today!**

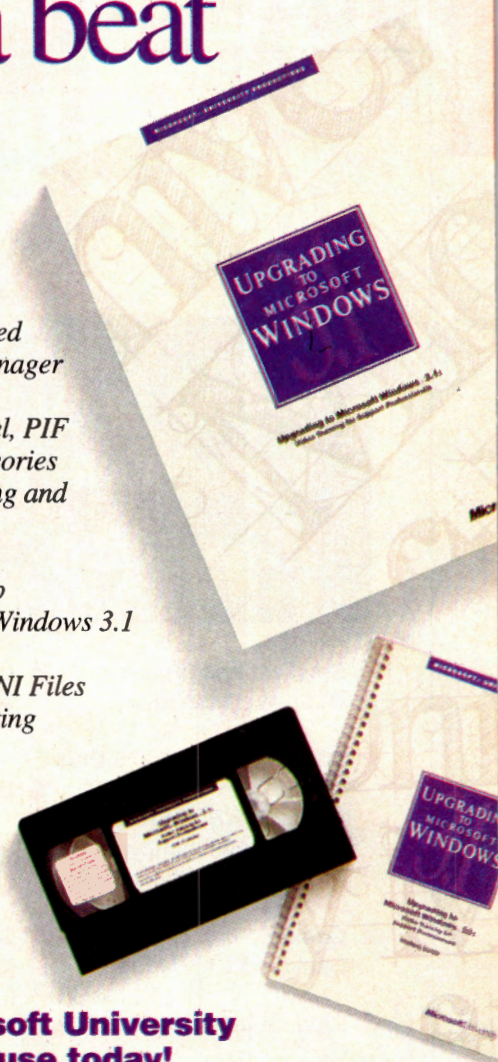
To order, call
Programmer's Paradise®
800-445-7899

Microsoft University offers an integrated technical curriculum on Microsoft systems software for support professionals, application developers, and information system managers. Courses for support professionals include: the *MS-DOS® 5 Installation & Optimization* video course and *Microsoft Windows 3.1 for Support Professionals*, a comprehensive four-day course.

Microsoft University

Microsoft University, 10700 Northup Way, Bellevue, Washington 98004-1447
(206) 828-1507, Fax (206) 828-2813.

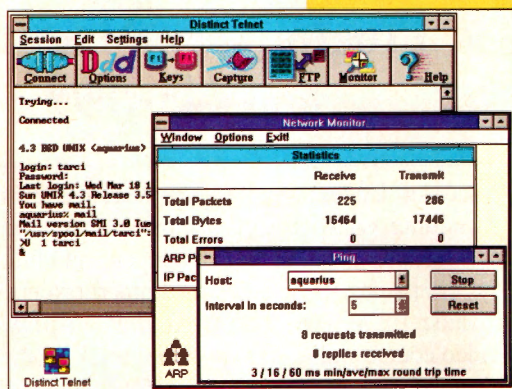
©1992 Microsoft Corporation. Microsoft and MS-DOS are registered trademarks and Windows is a trademark of Microsoft Corporation. TrueType is a registered trademark of Apple Computer, Inc. Code 923



Distinct[®] TCP/IP[™] for Windows[™]

*Windows Sockets,
RPC/XDR,
Telnet, FTP...*

- Smallest and fastest DLLs available today
- TCP/IP stack is 100% DLL
- Over 200 KB of FREE source code samples for Ping, Telnet, others
- Coexists with Novell, Banyan & LAN Manager
- Ping, Statistics and Config
- Up to 64 concurrent sockets with user - definable buffer size
- Both Client and Server
- Support for C, C++, Turbo Pascal and Visual Basic
- Optional applications: FTP (drag and drop), Telnet (multiple concurrent sessions) and Monitor



distinct

(408) 741-0781

P.O. Box 3410
Saratoga, CA 95070-1410

Fax: (408) 741-0795
E-mail: mktg@distinct.com

PASCAL LANGUAGE

	LIST OURS
Turbo Pascal for Windows by Borland	150 113

PROTOTYPING

Instant Prototyper 3.0 by Winsoft	99 89
LogSHIELD by The Stirling Group	395 356
ProtoGen by ProtoView Development Co.	199 99
ProtoView Windows	

RESOURCE TOOLS

ResourceSHIELD by The Stirling Group	149 129
ResourceSHIELD NT by The Stirling Group	295 249
Resource Workshop by Borland	50 45
Whitewater Resource Toolkit by Symantec	CALL .CALL

SMALLTALK LANGUAGE

Smalltalk/V Windows by Digital	500 399
--------------------------------------	--------------

SOURCE MANAGEMENT

Sourcerer's Apprentice for Windows by Borland	CALL .CALL
---	------------

TESTING TOOLS

DBAPrep by N Systems	395 335
Microsoft Test by Microsoft	395 275
On Stage Test Librarian by InfoMentor Software	595 536
SQA: Manager for Windows-Single user by SQA	995 899
Multi-user	CALL .CALL
SQA:Robot by Software Quality Automation	495 446
Multi-user	call call

TRAINING

WindowsTeach by IntelligenceWare	123 111
--	--------------

ADDITIONAL LANGUAGES/ PRODUCTS

Actor 4.0 by Symantec	249 .CALL
Actor Professional 4.0 by Symantec	495 .CALL
Button Tool by OutRider Systems	50 45
CARETS & CURSORS by Instant Replay Corp	75 69
ColRFax for Windows by Black Ice Software, Inc.	179 159
DeMystifiers by MicroQuill Software Pub.	129 105
Development ToolsKan Set by Kansmen Corp.	589 539
Distinct TCP/IP for Windows	495 446
ET Windows by Software Bytes	80 72
Forest & Trees for Windows	495 446
InstallSHIELD by The Stirling Group	395 356
Instant Windows 3.0 by WinSoft	495 446
KnowledgePro Windows by Knowledge Garden	249 224
KnowledgePro Windows Gold	549 494
LogSHIELD by The Stirling Group	395 356
MemSHIELD by The Stirling Group	395 356
MFC C++ Switch-It [™] Code Generation Module by Blue Sky Software	495 445
Microsoft Windows Device Development Kit	500 350
Microsoft Windows Resource Kit	500 350
Microsoft Windows SDK	349 229
Objective-C by Stepstone	249 224
ObjectVision 2.0 10 Pack by Borland	999 749
ObjectVision 2.0 by Borland	149 105
Out of Controls by Celest Software	229 195
w/source	459 389
OWL C++ Switch-It [™] Code Generation Module by Blue Sky Software	495 445
Report Ease for Windows by Sub Systems, Inc.	379 339
REXX/Windows by Kilowatt Software	149 127
RoboHELP-Help authoring tool by Blue Sky	495 446
Spinnaker Plus/Windows by Spinnaker	495 446
TbxSHIELD by The Stirling Group	295 266
ToolsKan-3D Chart by Kansmen Corp.	499 449
ToolsKan-Field Validation by Kansmen Corp.	99 89
ToolsKan-Ribbon/Icon Bar by Kansmen Corp.	99 89
ToolsKan-Status Bar by Kansmen Corp.	99 89
ToolsKan-Table by Kansmen Corp.	399 359
ToolsKan-Toolbox by Kansmen Corp.	99 89
VistaCOM for Windows by Control Data Corporation ..	250 225
Visual/SQL by Blue Sky	CALL .CALL
Win-Link by Celtic Software Inc.	30 27
Win-Link Developer's Kit by Celtic Software Inc.	249 224
Windows Help Magician by Software Interphase, Inc.	199 169
Windows Workstation by Automated Design Sys.	CALL .CALL
WinMem by Sub Systems, Inc.	169 149
WNDX GUI Toolbox by WNDX	499 449

OPERATING SYSTEMS AND ENVIRONMENTS

DESQview 386 by Quarterback	220 149
DESQview by Quarterdeck	130 117
DESQview Companion	100 90
DR DOS 6.0 by Novell	99 59
ESIX OP SYS Products	CALL .CALL
IBM OS/2 2.0	195 149
IBM OS/2 2.0 Extended Services	595 535
IBM OS/2 2.0 Upgrade	149 135
Interactive Products	CALL .CALL
Microsoft Windows 3.1	149 99
MS DOS 5.0 by Microsoft	100 65
PC-XView for Windows by UniPress	445 401
SCO 386 UNIX System V	CALL .CALL
SCO XENIX System V	CALL .CALL
VM/386 by IGC	199 179
VM/386 NetPak	150 135
XView for Windows by UniPress Software	449 404

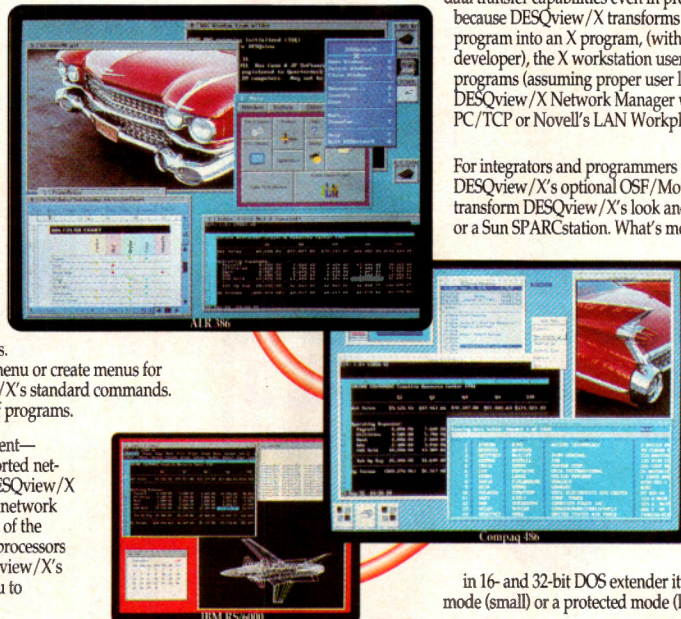
Developing GUI-based applications? Don't crawl. Fly!

DESQview/X brings you the efficient windowing, pre-emptive multitasking, DOS and Microsoft Windows compatibility, memory management, data transfer and keystroke macro capabilities that you would expect from the publisher of DESQview and QEMM-386. We've taken this tried-and-true foundation and added all the hot new stuff you want: X Window System graphics, Adobe Type Manager for scalable fonts in DOS windows, a graphic desktop, customized menus and icons, distributed computing, and a built-in 16- and 32-bit shared DOS extender with dynamic link libraries and virtual memory. The result is power unmatched today, yet widely promised for tomorrow by our competition.

DESQview/X is based on the X Window System it's an international, multi-vendor standard. That means programs written to it will work on a long list of machines. It's tested and proven over 8 years unlike other environments that make you rewrite code every time there's a new release.

DESQview/X is completely customizable. Create macros for each program or to go between programs. Add the names of these macros to DESQview/X's menu or create menus for specific programs. Change the names of DESQview/X's standard commands. Design graphic icons to open programs or groups of programs.

When DESQview/X is used in a PC LAN environment—Novell NetWare or NetWare Lite or NetBIOS-supported networks such as LAN Manager or Banyan VINES—DESQview/X adds distributed processing capabilities to standard network services. Because of DESQview/X's built-in support of the X Window System, you can use available memory, processors or applications located on other PCs. Further, DESQview/X's File Manager support of the FTP protocol allows you to manage and transfer files network-wide.



Add a DESQview/X PC to a network supporting X workstations (IBM RS/6000, Silicon Graphics, Sun SPARCstation or others) and you can use programs running on the remote X workstation simultaneously with your DOS or MS-Windows programs. Use DESQview/X's data transfer capabilities even in programs that are running remotely. But more, because DESQview/X transforms every DOS-text and Microsoft Windows program into an X program, (with no special effort required by the program's developer), the X workstation user can use DOS text and Microsoft Windows programs (assuming proper user licenses). You will need the optional DESQview/X Network Manager which provides network interfaces to FTP's PC/TCP or Novell's LAN Workplace for DOS to do all this.

For integrators and programmers wanting conformity of look and feel, add DESQview/X's optional OSF/Motif or OPEN LOOK window manager and transform DESQview/X's look and feel into the look and feel of an IBM RS/6000 or a Sun SPARCstation. What's more, you get all of the customization that comes with either window manager.

For programmers, there are also DESQview/X graphic toolkits consisting of the X Consortium's X11 libraries and the Open Software Foundation's Motif ported by Quarterdeck to DOS and DESQview/X. If you have already developed an X program running on UNIX or another operating system, you'll find that you can port your program in a matter of hours or days, depending on its size. And because of the built-in Adobe Type Manager your program can take advantage of scalable fonts and of DESQview/X's printer support. What's more, because of the built-

in 16- and 32-bit DOS extender it's your choice whether your program is a real mode (small) or a protected mode (large) program.

DESQview/X™ lets you create X Window graphic programs for DOS. Fast.

We all recognize the importance of graphical user interfaces and windowing, multitasking DOS and Microsoft Windows programs, scalable fonts and networking, and 32-bit (large) programs. But there are some people who would have you think they're the only game in town. Don't listen to them.

Once again, the product that gives you the edge over your competition is not offered by the company in fashion or even the one longest in business. Rather, it's the small company who must offer value and innovation in order to compete. In this case we are that company and the product is DESQview/X.

You probably know us as the leader in memory management. Long-time industry gurus will recognize us as the pioneer in DOS multitasking and windowing.

Our newest breakthrough, DESQview/X, transforms ordinary 386SX (or better) PCs into graphical workstations capable of true distributed computing and interoperability.

Don't you owe it to yourself and to your clients to look into our better way of doing things? Send for more information on DESQview/X and/or our upcoming breakfast meetings in your area.

Let your ideas take flight.

Sign me up for flying lessons! Please send information on:

☐ DESQview/X ☐ Quarterdeck breakfast meetings

Name _____ Title _____

Address _____ Company _____

City _____ State _____ Zip _____



Quarterdeck Office Systems, 150 Pico Boulevard, Santa Monica, CA 90405 (310) 392-9851 Fax (310) 314-4219
Quarterdeck International Ltd., B.I.M. House, Crofton Terrace, Dun Laoghaire Co. Dublin, Ireland Tel.(353) (1) 284-1444 Fax: (353) (1) 284-4380

©1992 Quarterdeck Office Systems. Trademarks are property of their respective owners.

APPLICATION SOFTWARE

DOS

LIST OURS

CAD

AutoCAD by AutoDesk	3750	3375
AutoDesk 3-D Studio by AutoDesk	2999	2699
AutoDesk Animator Pro by AutoDesk	795	716
AutoSketch by Autodesk	250	225
Design CAD 2-D by American Small Business	349	314
Design CAD 3-D	399	359
Design SYM	179	161
Drafix 3-D Modeler	295	266
Drafix CAD 386 Extension by Foresight	195	176
Drafix CAD for Windows	695	626
Generic 3-D Drafting	349	314
Generic CADD 5.0	495	446
Generic CADD Level 6	495	446

CIRCUIT DESIGN

Schema Generator by Evergreen CASE Tools	195	176
Schema III by Omaton	495	446
Schema PCB	975	878
Schema Plot	300	270
Schema Route	750	675
smARTWORK by Wintek	895	806
Tango Auto Route Plus	995	896
Tango CAD Pack Series II	995	896
Tango PCB Series II by Accell	595	536
Tango PCB Series Plus	995	896
Tango Route	595	536
Tango Schematic	595	536

COMMUNICATIONS

BLAST Pro by BLAST/Comm. Research	169	152
Brooklyn Bridge 3.0 by Fifth Generation	140	126
Carbon Copy Plus 6.0 by Microcom	199	118
ClipBoard Electronic Mail Sys by FrontLine SoftwareCALL	195	145
Close-Up Customer by Norton-Lambert	199	175
Close-Up Dual Pack	199	175
Co/Session (2 user license) by Triton Tech	195	155
Co/Session Application	125	95
CoTerm 100 by Coefficient	195	176
CoTerm 220	245	221
Crosstalk Communicator by DCA/Crosstalk	99	89
Crosstalk MK IV	295	215
Crosstalk XVI	195	125
Datalink by California Software Products Inc.CALL	170	153
Desklink by Travelling Software	495	446
Distinct TCP/IP Dev. Kit by Distinct	295	221
DynaComm Asynch for DOS	179	129
Norton PC Anywhere by Symantec	495	346
PC/TCP by UniPress Software	400	360
PC/TCP Plus by UniPress Software	490	441
PROCOMM PLUS by DataStorm	149	134
Reflections Series by Walker, Richer & QuinnCALL	299	269
Relay Gold by Microcom Software	195	135
Remote 2 by DCA	195	135

Remote 2 Caller	89	80
Remote 2 Host	129	116
Remotely Possible by Avalon	199	169
Session/XL by Triton Technologies	95	86
Sky Tek FAX*Net by AMA	1998	1798
Sky Tek FAX*SHARE (1-8) users	750	675
Smarterm 240 by Persoft	375	338
Smarterm 400 by Persoft	225	203
Terminal Plus for Windows by Futuresoft	100	63
TERRANOVA for DOS by AT&T	200	180
w/PBX Report Generator	500	425
TERRANOVA Network Version	2500	2250
TGRAF-05 Plus	195	175
TGRAF-15	1995	1799
TNET-15	1995	1799
VFAX by Data Dispatch Corporation	995	899
VistaCOM VII by Control Data	250	225
XVision by UniPress Software	449	399

CONTRACTS

QuickForm Contracts by Invisible Hand Software	195	175
QuickForm Contracts Pro by Invisible Hand Software	395	359

DATA ACQUISITION & ANALYSIS

DADISP 2.0 by DSP	1695	1539
DADISP Extended Memory by DSP	1795	1616
DADISP-105 by DSP	1295	1166
DADISP-488 by DSP	495	446
DGN/CAPTURE by DAT/EM Systems Intl.	4995	4245
DWG/CAPTURE by DAT/EM Systems Intl.	6495	5519
LABTECH Chrom	995	896
LABTECH GPIB Drivers	295	266
LABTECH Notebook	995	896
LABTECH Realtime Access	295	266
MICRO-CAP II by Spectrum Software	895	806
MICRO-CAP III	1495	1346
MICRO-CAP IV Professional by Spectrum Software	2495	2246
PC-MATLAB by Mathworks	695	626

DESKTOP PUBLISHING

Finesse by Logitech	179	161
Master Gallery by SoftAge	199	169
OmniDraft DOS by Caere Corp.	100	69
OmniProof DOS	150	135
OmniSpell DOS	100	90
OmniTrace DOS	150	135
Publish It! by Timeworks	150	135
Publisher's Powerpak by Atech	80	72
Publishers Type Foundry	545	491

DRAW/PAINT

Artline by Novell	595	536
Dr. Halo IV by Media Cybernetics	140	115
DrawPerfect by WordPerfect	495	446
Publishers Paintbrush by ZSOFT	495	446
QuickDraw by StrandWare	259	233
PC Paintbrush IV by ZSOFT	100	90
PC Paintbrush Plus	199	179

True WINDOWS Remote Control

"You can be in your office anywhere in the world!"

- ◆ Intelligent remote control
- ◆ Super VGA Support
- ◆ File Transfer
- ◆ Modem support
- ◆ Interactive Chat
- ◆ Security



Remotely Possible/Dial

- ◆ Allows you to intelligently control a Windows PC across town or around the World.
- ◆ Access networks to oversee any workstation running Windows.
- ◆ Save time with interoffice communication.
- ◆ Telecommute and have remote access to your office PC from the convenience of your hotel, home or other remote location.



AVALAN
TECHNOLOGY

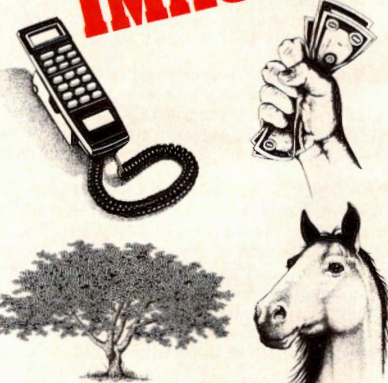
Call Programmer's Paradise
800-445-7899 to order today!

Professional CLIP ART GALLERY

**NEW
VERSION
3.0!**



**OVER 1000
IMAGES**



- ✓ Incredible Detail!
- ✓ Easy to use!
- ✓ Over 1000 Images!

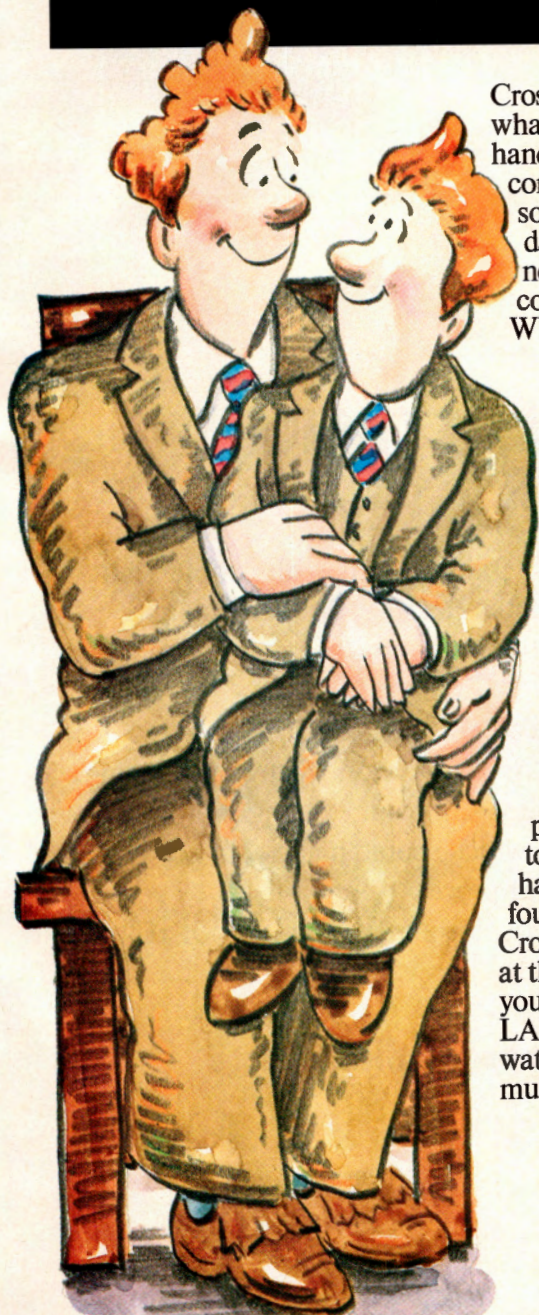
**To Order call
1-800-445-7899**

Compatible with: WordPerfect, Pagemaker, Windows, CorelDraw!, Ventura, Microsoft Word, and more! Call for details!

The Master Gallery of Clip Art contains 18 volumes of clip art including: Animals, Business, Food, Sports, Religion, Holidays, Plants, Transportation, and more!

SoftAge Publishing
1753-C East Palmdale Blvd #433
Palmdale, Ca 93550
1-800-736-7103

What Daddy Never Told You About DOS Communications.



Crosstalk® Mark 4 has always been what *Lotus* magazine called, "The hands-down Big Daddy of DOS communications," but there were some things even *this* async "big daddy" never told you. Until now, not even Crosstalk Mark 4 said you could emulate terminals like the WYSE® 50/60 or the HP® Series.*

Well, the new version 2.1 says you can have these emulations and a lot more besides.

From DEC LAT To LAN Packs, Now Big Daddy Has It All!

There's DEC LAT support, so you can connect to a VAX® via Ethernet and bypass your terminal server. There's queue dialing. An enhanced host mode. And new CASL™ commands.

You can even get a network pack with LAN licensing for up to four concurrent users. If you have more than four people using Crosstalk Mark 4 at the same time, you just add more LAN packs. And watch the savings multiply.



Big Daddy, The Mother Of All Comm Packages.

Even before these latest achievements, the editors of *PC Magazine* chose Crosstalk Mark 4 as the top performer among all comm packages

“The hands-down Big Daddy of DOS communications packages.”

—*Lotus*, October 1991

for 1991, calling it "A top notch program that does almost everything and does it all right..." That's everything from VT™ emulations and ZMODEM to FTTERM and IN\$FILE. You get CASL, a powerful programming language like C or Pascal. Speeds up to 115,200bps. Multiple sessions. Modem sharing on LANs. Synchronous hardware support. The works!

Get Your Hands On The Hands-Down Big Daddy—Free!

Right now, you get Crosstalk Mark 4 absolutely free when you buy the Crosstalk Mark 4 LAN Pack. It's a \$245 giveaway! And it's yours if you call **Programmer's Paradise** and order by **December 31, 1992!**

Just call 1-800-445-7899.

CROSSTALK

Another Communications Solution From DCA®

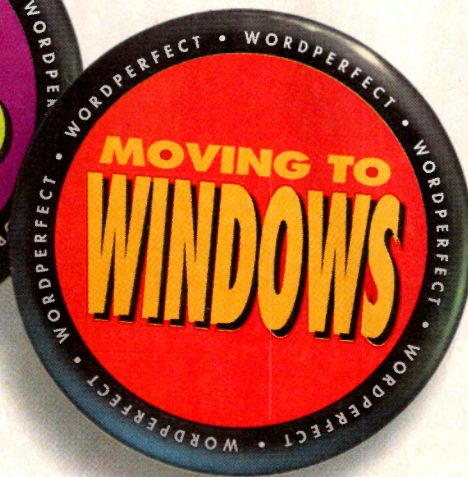
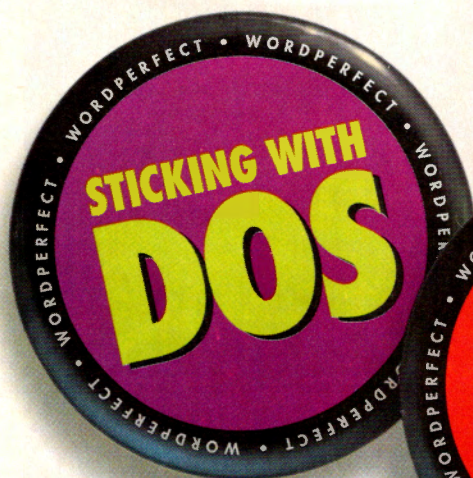
*2392A, 2394A, 2623A or 2624A. © 1992 Digital Communications Associates, Inc. All rights reserved. DCA and Crosstalk are registered trademarks and CASL is a trademark of Digital Communications Associates, Inc. All other brand and product names are trademarks or registered trademarks of their respective owners. Reprinted from *Lotus Magazine*, October 1991.



April 1991
Crosstalk Mk. 4

April 30, 1991
Crosstalk Mk.4 Version 2.0

Vol. 7 No. 12 1990
Crosstalk Mk.4



WITH THE WORD PROCESSOR OF CHOICE, THE CHOICE IS YOURS.

WordPerfect® has always been committed to customer support. That includes supporting you in your choice of operating systems, both now and in the future.

Right now, with a single WordPerfect license, you and your colleagues are free to work the way you work best. With WordPerfect for DOS. Or WordPerfect for Windows. Or both—even on the same computer.

(Whatever your choice, you'll have no

problem sharing documents with people who choose differently. Because, different though they are, the two programs share an identical file format.)

Down the road, if you decide OS/2 is the way to go, you'll be free to move on. With your existing WordPerfect files. And your existing WordPerfect license. All of which should make your present and future word processing choice a lot clearer.

WordPerfect®

WordPerfect® 5.1 for DOS and Windows, now available at

CALL TODAY
Programmer's Paradise®
(800) 445-7899



WordPerfect is a registered trademark of WordPerfect Corporation within the United States and other countries. All other brands and product names are trademarks or registered trademarks of their respective companies. © WordPerfect Corporation 1992.

APPLICATION SOFTWARE

GRAPHING & PLOTTING

LIST OURS

TGRAF-05 Plus	195	176
TGRAF-15 DOS	1995	1796
Graph-In-The-Box by New England	200	180
Grapher by Golden Software	199	179
Harvard GeoGraphics by Software Publishing	395	309
HP/PLOT by DAT/EM Systems Intl.	495	446
MicroSoft Chart	395	278
OmniDraft DOS by Caere Corp.	100	90
OmniGraph by EZ Soft	150	135
OMNIPLOT[S] by MicroCompatibles	195	176
Perspective Junior by Three D	149	134
Picture Eze by Application Techniques	149	134
Picture Perfect by Computer Support	295	266
Surfer by Golden Software	499	449

IMAGE HANDLING

AccuSoft Image Format Library by AccuSoft	295	266
HALO Image File Format Lib by Media Cybernetics	349	279
SHOWCASE Image Database by Sun Country	1495	1346
SHOWCART Image Catalog	200	180
SUNSCAN Digital Scanware by Sun Country	300	270
SUNSHOW "C" Lang. Image Library by Sun Country	350	315
SUNSHOW Adv Image Tlkt by Sun Country	350	315
SUNSHOW Advanced Image Converter	250	225
SUNSHOW Database Professional	200	180
TEMPRA GIF by Mathematica Inc.	149	95
TEMPRA PRO	495	395
TEMPRA SHOW	199	145
TEMPRA TURBO CHARGER	295	235

INFORMATION MANAGERS

Act! by Contact Software Intl.	395	315
Agenda by Lotus Development Corp.	199	149
askSam by AskSam	395	356
Best Choice3.0 by Sterling Castle	99	89
GrandView by Symantec	295	209
GUIDE by Owl International	495	446
Linkstant by Draiken Software Inc.	249	224
Sidekick by Borland Intl.	100	75
Who-What-When by Chronos	295	266
ZYINDEX by ZYLAB	395	356

INTEGRATED SOFTWARE

Framework IV by Borland	695	521
Lotus Symphony	695	521
Q&A Version 4.0 by Symantec	399	280

MATHEMATICS

CritGauss Mod. 1 Transform. and Analysis by Aptec	295	265
CUPL by Logical Devices	150	120
DC/CAD 386 by Design Computation, Inc.	995	895
DC/CAD Basic	595	535
DC/CAD Professional System	595	535
DERIVE by Soft Warehouse	250	225
ET Neural Networks by Software Bytes	320	289
GAUSS Math & Stat System by Aptec	495	445
GAUSS-386i by Aptech Systems, Inc.	995	899
MacCUPL by Logical Devices	995	845
MathCAD by MathSoft	495	446
Mathematica 386 by Wolfram	595	536
Mathematica 386/7	895	806
Mathematica 386/Weitk	1195	1076
Otis by Odin Research	995	895
SimGauss 386 V2.0 by Aptech Systems, Inc.	375	339
TKISolver Plus by Universal Tech Sys.	395	356

MULTIMEDIA, AUTHORING

Instant Replay Professional by Instant Replay	795	619
TEMPRA GIF by Mathematica Inc.	149	95
TEMPRA PRO	495	395
TEMPRA SHOW	199	145
TEMPRA TURBO CHARGER	295	235

PRESENTATION GRAPHICS

Applause II by Borland International	495	371
Charisma 2.1 by Micrografix	495	354
Freelance Graphics by Lotus Development Corp.	495	371
Harvard Graphics	595	465

PROJECT MANAGEMENT

CA-SuperProject for Windows by Comp. Assoc.	895	628
Harvard Project Manager by Software Publishing	695	543
Microsoft Project	495	349
Project Scheduler 5 by Sector	685	617
TimeLine 5.0 by Symantec	699	487

SCIENTIFIC EDITORS

ChiWriter by Horstmann Software	349	314
EXP by Brooks/Cole Publishing	295	266
PCTeX 386 by Personal TeX	499	449
PCTeX by Personal TeX	499	449
TECH"GRAPH"PAD by binary engineering	395	356

SPREADSHEETS

CA-SuperCalc by Computer Associates	149	134
Lotus 1-2-3 Release 2.4	495	371
Lotus 1-2-3 Release 2.4 Node	495	371
Lotus 1-2-3 Release 2.4 Server	795	596
Lotus 1-2-3 Release 3.1+	595	446
Lotus 1-2-3 Release 3.1+ Node	595	446
Lotus 1-2-3 Release 3.1+ Server	895	671
Lucid 3-D Plus by Personal Comp. Support	99	89
Microsoft Multiplan	195	137
Quattro Pro 4.0 by Borland Intl.	495	371
Quattro Pro 4.0 LAN by Borland Intl.	395	296

SPREADSHEET UTILITIES

Baler by Baler Software	495	446
Baler XE	795	695
Budget Express by Symantec	149	134
Inword by Funk Software	100	90
Look & Link by Personics	100	90
Quattro Pro Assist by Instant Replay	99	89
SeeMORE by Personics	100	90
Sideways by Funk Software	90	81

STATISTICS

LIST OURS

Systat w/Sygraph	895	806
CSS/3 by StatSoft	595	536
CSS/Statistics by StatSoft	495	446
CSS/Statistics	795	716
GB-STAT by New England Software	300	270
Microstat II by Ecosoft	395	356
NWA STATPAK by Northwest Analytical	495	446
SPSS/PC & Advanced Stats by SPSS	395	349
SPSS/PC+ Base SPSS	195	176
SPSS/PC+ Data Entry by SPSS	395	349
SPSS/PC+ Graphics by SPSS	395	349
SPSS/PC+ Stats Model by SPSS	395	349
SPSS/PC+ Tables by SPSS	395	349
SPSS/PC+ Trends by SPSS	395	349
Statgraphics by STSC	995	815
Statgraphics Plus by STSC	1595	1436
Statistics I: Tests & Estimation by MathSoft	99	89
Statistics II: Modeling & Simulation	99	89
Sygraph by Systat	495	446

WORD PROCESSING

HyperWriter by Ntergaid Inc.	495	446
LetterPerfect by WordPerfect	149	134
Microsoft Word	450	315
Microsoft Works	149	104
Multimate Advantage II by Borland Intl.	695	521
OmniProof DOS	150	135
OmniSpell DOS	100	90
Q&A Write by Symantec	199	143
Sprint by Borland	200	169

TOTALWORD by Volkswriter	495	446
Volkswriter 4	199	179
Volkswriter Deluxe PLUS	99	89
WordPerfect 5.1 by WordPerfect	495	279
WordPerfect Executive	249	224
WordPerfect Office	149	134
WordStar 2000+ by WordStar	495	446
WordStar 7.0	495	446
XyWrite III Plus by XyQuest	445	401

WORD PROCESSING UTILITIES

Grammatik IV by Reference Software	99	89
Rightwriter by WriteSoft	100	90
Webster New World Pro Speller by Deneba	30	27
Webster New World Pro Thesaurus	130	117
Webster New World Writer by Deneba	79	71
Word Finder by Microlytics	60	54
WORD FOR WORD by Software Toolworks	150	135
Writer's Toolkit DOS by Systems Compatibility	129	116

Fax your order (908) 389-9227

The Experts Agree

"I purchased GAUSS for my PC three years ago. ...After three days exploring the package, I was hooked. I became an avid GAUSS user, and remain so today..." *E.J. Bedrick, Statistics and Computing*

"Gauss is remarkable in its facilities and capabilities. Indeed in the experience of this reviewer the package is unprecedented in its scope, flexibility and power." *Peter J. Dalton, Journal of Economic Surveys*

"I love the new debugging facility and the new graphics drivers. ... I'm using a 50MHz 486 and the speed of GAUSS is just amazing..." *David Baird, Biometrician, NAI Technology*

"The speediest and most versatile of the mathematical programming languages."
"It offers both quick graphics and magnificent presentation-quality graphics."
"GAUSS is a number cruncher par excellence." *Barry Simon, PC Magazine*

Maximum Productivity

If you work with numbers, the GAUSS programming language will make you more productive, giving you more answers to more questions, more quickly... **guaranteed!**

Whatever language you are now using, you'll find that GAUSS greatly shortens development time. With GAUSS the basic unit of analysis is a matrix, resulting in a syntax that closely resembles common mathematical expressions. Since matrix operations are assumed, most of the loops required by other languages are not necessary in GAUSS.

You can also compile FORTRAN, C, or assembly language from within GAUSS, providing you with access to an almost limitless selection of applications.

New **Applications Modules** have been designed to eliminate programming for many tasks, while maintaining flexibility for nonstandard problems. They include: poisson regression, nonlinear simultaneous equations, optimization, maximum likelihood estimation, linear regression, linear programming, signal processing, nonlinear dynamic simulation, and more.

GAUSS-386i 3.0

Fast and flexible, version 3.0 incorporates many more functions and a new more intuitive user interface. Some of the latest features include:

Full **32-bit Addressing**, nearly unlimited matrix and workspace size (up to 4 Gigabytes), **Virtual Memory**, transparent handling of **Complex Numbers**, a powerful **Source Level Debugger**, a built-in **Data Translator**, versatile **Multiple File Viewing/Importing Windows**, and a spreadsheet like **Matrix Editor**.

GAUSS's legendary 2-D & 3-D **Publication Quality Graphics** now provide SVGA 1024x768 video, Lotus PIC, PCX, HPGL/2, and Color PostScript® file formats for cross-application and cross-platform compatibility; and support for the latest printers and plotters.

GAUSS-386i 3.0 is just \$995 and comes with a 30 day money back guarantee.

GAUSS-386i, and GAUSS Light require a 386 or 486 compatible computer with an Intel 387 or compatible math coprocessor, a minimum of 4 Megabytes of RAM, and a hard disk. GAUSS, GAUSS-386, GAUSS-386i, and GAUSS Light are trademarks of Aptech Systems, Inc. Other trademarks are the property of their respective owners.

UNIX workstation versions available 4th quarter 1992.

Aptech Systems, Inc. Tel: (206) 432-7855, Fax: (206) 432-7832
23804 South East Kent-Kangley Road, Maple Valley, WA 98038

GAUSS

APPLICATION SOFTWARE

OS/2

LIST OURS

COMMUNICATIONS

DynaComm Asynch for OS/2 295 221

DESKTOP PUBLISHING

PageMaker for OS/2 by Aldus Corporation 795 716

Ventura Publisher 795 716

INFORMATION MANAGER

Pack Rat for OS/2 395 356

Sidekick by Borland Int'l. 200 150

PRESENTATION GRAPHICS

Freelance Graphics OS/2 by Lotus 695 521

SPREADSHEETS

Microsoft Excel for OS/2 495 349

Lotus 1-2-3 695 521

WORD PROCESSING

WordPerfect for OS/2 by WordPerfect 495 299

Microsoft Word for OS/2 495 347

WINDOWS

LIST OURS

COMMUNICATIONS

Close-Up for Windows & DOS 199 175

Crosstalk for Windows by DCA/Crosstalk 195 135

Distinct TCP/IP for Windows 495 446

DynaComm Asynch for Windows by FutureSoft 249 159

PROCOMM PLUS for Windows by DataStorm 149 134

Relay Gold/Windows by Microcom Software 399 359

Remotely Possible/Dial by Avalon 199 169

Select by California Software Products Inc. CALL CALL

Soft/3270 by PH Technologies 150 129

SuperFax for Windows by Pacific Image 99 89

Terminal Plus for Windows by Futuresoft 100 90

TERRANOVA for Windows 245 221

VistaCOM for Windows by Control Data Corporation 250 225

DATABASE

AceFile for Windows by Ace Software Corporation 149 149

Forest & Trees for Windows 495 446

ORIN for Windows 2.4 by Objective Solutions 1295 1166

Superbase 4 by Software Publishing 695 543

Superbase 4 Developer's Edit. by Software Pub 1195 933

DESKTOP PUBLISHING

Adobe Illustrator for Windows by Adobe Systems 695 589

Adobe Streamline 195 176

Adobe Type Manager 99 89

FrameMaker 3.0 by Frame Technology 795 716

Microsoft True Type for Windows 80 56

PageMaker for Windows by Aldus Corporation 795 716

Picture Publisher by Micrografix 695 497

Ventura Publisher Windows by Xerox 795 669

DRAWING/PAINTING

Aldus Freehand 595 536

Corel Draw! by Corel Systems 595 475

Corel Draw-CD ROM Blockbuster 1395 1256

Designer by Micrografix 695 497

Fractal Design Painter/Windows 399 359

Harvard Draw for Windows by Software Publishing 595 465

PC Paintbrush Plus Windows 149 134

PC Paintbrush Windows 90 81

Windows Draw by Micrografix 150 109

INFORMATION MANAGERS

Act! for Windows by Contact Software Intl. 495 395

On Time for Windows 130 117

Pack Rat for Windows 395 356

ZyINDEX for Windows by Zylab 295 266

INTEGRATED SOFTWARE

Lotus SmartSuite 795 497

Microsoft Office for Windows 750 495

MATHEMATICS

MathCAD/Windows by MathSoft 695 626

Mathematica/Windows by Wolfram 995 845

Simulink by The Mathworks 3995 CALL

PROJECT MANAGEMENT

Microsoft Project for Windows 695 479

On Target by Symantec 399 280

TimeLine/Windows by Symantec 699 487

PRESENTATION GRAPHICS

Charisma by Micrografix 495 354

Freelance Graphics/Windows by Lotus 495 371

Harvard Graphics for Windows by Software Publ. 595 465

Microsoft PowerPoint for Windows 495 349

Persuasion II for Windows by Informix 495 446

SPREADSHEETS

Lotus 1-2-3 /Windows 595 359

Lotus 1-2-3 /Windows Node 595 446

Lotus 1-2-3 /Windows Server 895 671

Microsoft Excel for Windows 495 329

Wingz for Windows by Informix 499 449

WORD PROCESSING

Ami Professional by Lotus Development 495 340

Grammatik Windows 99 89

Just Write by Symantec 249 224

Microsoft Word for Windows 495 339

Microsoft Works for Windows 199 139

Professional Write 2.2 by Software Publishing 249 195

Rightwriter for Windows by WriteSoft 100 90

Writer's Toolkit Windows by Systems Compat. 129 116

WordPerfect for Windows by WordPerfect 495 299

WordStar for Windows 495 446

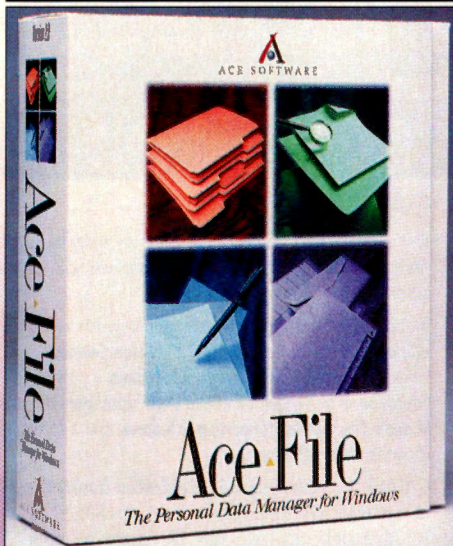
Tell your sales
rep which format
you prefer:

5 1/4" or 3 1/2"
Disks



Ace-File for Windows 2.0!

▲ The Personal Data Manager for Windows ▼



New Version!

AceFile 2.0 for Windows—Winner of the Windows Magazine 1992 Win Award is an intuitive personal data manager. AceFile provides multiple views—form, report, labels, list, mailmerge, crosstab and 16 different graphs/charts—all with colorful 3D effects and toolbars. Easy-to-build expressions and indexes—report and analyze information from multiple files. Use new or existing data (dBASE, Lotus 1-2-3, EXCEL, or ASCII Files). Network compatible.

Special Introductory Price \$149

To order call Programmer's Paradise®:

1-800-445-7899

ACE SOFTWARE CORPORATION

1740 Technology Drive, Suite 680 • San Jose, California 95110

▲ 408-451-0100 ▼ FAX ▲ 408-427-1018 ▼

Backup. For people who don't.



Everyone who uses a PC ought to back up regularly. But most people don't back up at all.

In fact, if the people you work with are like those working in most places we know, about the only way their data is going to get backed up is if it happens without them.

Guess what?

Now it can.

Now you can set up fully automatic, unattended backups for every PC in the house — DOS*, Windows*, Novell* network servers, even Macintosh*.

What's more, you can easily customize the nature and timing of each one to suit *your* specifications.

And transform a simple, effective backup policy from fantasy into fact.

All you need is Fastback Plus.

The world's most popular backup software comes complete with a backup policy of its own — in the form of pre-designed scheduling templates* — that you can adapt

with our unique Macro Editor.

What makes our Macro Editor unique?

It uses plain English commands. Which means you can actually use it.

Using Fastback Plus on a PC is very much like using it on a Mac — same look, same functionality.

Same backups, even.

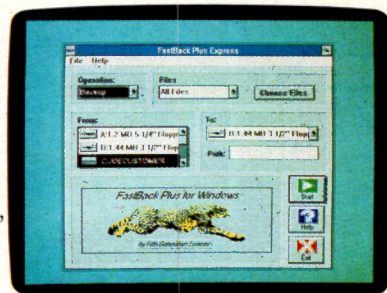
That's right. You can actually restore a Macintosh* file directly onto a PC, and vice versa.

Nobody else can do that.

But then, nobody else can back up

more than 3MB per minute on an AT. Or up to 10MB per minute on a '386.

No other Windows, Mac or Network



If automated, unattended backups aren't your style, you can still enjoy unprecedented convenience with our Express Menu, which InfoWorld considers "only slightly more complicated than an on/off switch."

version can run fast enough to see our tail lights.

And nobody else comes close to our level of reliability.

You can destroy as much as 11% of the data on a diskette and Fastback Plus will recover every last byte, error-free.

Unbelievable?

That's what the people at *InfoWorld* thought.

So they "scratched both disks with the point of a knife to simulate accidental damage" and discovered, to their astonishment, that Fastback Plus "was 100% successful at restoring all the [damaged] files."

Still unsatisfied, they "ran the test several more times, increasing the severity of damage until we began to fear for our disk drives, but we were unable to generate a single byte of unrecoverable data."

We wouldn't recommend trying this test yourself. But if you insist, you'll be glad to know that Fastback Plus is backed up by our vaunted 24-hour toll-free technical support and a one-year money-back guarantee.

There's more. So pick up the phone. Dial 1-800-445-7899

And tell everyone to stand back.

*Scheduling templates included in DOS, Windows and Network versions.



FIFTH GENERATION SYSTEMS, INC

UTILITIES

DOS UTILITIES

ANTI-VIRUS

	LIST	OURS
AntiVirus by TCP TECHMAR	70	63
AntiVirus Plus	100	90
Central Point Anti-Virus	129	105
Data Security Plus by PC Guardian	100	CALL
Dr. Solomon's Anti-Virus Toolkit 5.11 by Ontrack	149	134
Norton Anti-Virus by Symantec	130	95
Virex-PC by Microcom	100	90
Virus Prevention Plus by PC Guardian	125	113
VirusCure Plus by IMSI	100	CALL

BACKUP

Back-It by Gazelle Systems	169	152
Central Point Backup by Central Point Software	129	105
Copy II PC by Central Point Software	50	45
CoreFast by Core Intelligence	149	134
Fastback Plus 2.2 by Fifth Generation	149	125
Fastback Plus 3.1 by Fifth Generation	189	139
Fastback Plus DOS 1.0 Express	99	85
Fastback Plus Network	225	189
Intelligent Backup by Sterling Software	150	135
Norton Backup 2.0 by Symantec	129	109
PC-Fullback by Westlake Data	99	89
SitBack by SitBack Technologies	99	89

DATA RECOVERY

Mace Utilities 1990 by Fifth Generation Systems	149	135
Rescue by AllMicro	299	199

DIAGNOSTIC

CheckIt by Touchstone Software	149	134
CheckIt Floppy Drive Testing	70	63
Disk Technician Gold by Prime Solutions	149	134
DosUtils 2.1 by Ontrack Computer	100	90
hTest/hFormat by Paul Mace Software	129	116
Manifest by Quarterdeck	60	54
OPTUNE by Gazelle Systems	100	90
PC Probe by Landmark Research International Corp.	99	85
Remote RX by Merrill & Bryan	130	117
SpinRite II 2.0 by Gibson Research	89	79
System Sleuth Pro Analyzer by Dariana	169	152

DISK MANAGEMENT

1 DIR Plus by Bourbaki	99	89
Beyond.Bat by Relay Communications	109	98
Bookmark Plus by Intellisoft	180	162
Command Plus by ESP Software	130	117
Command Plus w/Prog. Toolkit	160	144
Cubit 3.0 by Softlogic Solutions	70	63
Direct Access 4.10 by Delta Technology	99	89
Direct Access Network	595	535
Disk Dupe by Micro System Designs	79	71
Disk Dupe Pro by Micro Systems Design	179	155
Disk Manager	125	113
Disk Manager PS2 by Ontrack Computer	125	113
Disk Vision by BLOC	70	63

Diskette Manager 3 by BLOC	60	54
DoubledOS 5.0 by SoftLogic Solutions	69	62
Dr. Switch Dev. Pak 2.0	130	117
Dr. Switch-ASE 2.0	180	149
Fansi-Console Professional by Hersey Micro	120	108
FastTrax by FastTrax International	70	59
File Director PC by Fifth Generation Systems	129	109
Floppy Librarian by Stuart Matlock	90	81
MAC-IN-DOS by Pacific Micro	199	179
MKS Toolkit by Morrice Kern Systems	249	199
Norton Commander 3.0 by Symantec	149	108
OmniView by Sunny Hill	80	72
PreCursor by Aldridge Co.	99	89
QRAM by Quarterdeck	80	72
SpeedStor by Storage Dimensions	99	89
Tree86 by Aldridge	90	81
W LINK by MH Group	395	356
XENOCOPY-PC by XENOSOFT	80	72
ZyINDEX by ZYLAB	395	356

FILE COMPRESSION

Cubit 3.0 by Softlogic Solutions	70	63
DoubleDisk by EKD Computer	100	90
DS Squeeze by Software Toolworks	60	54
PKLite Professional by PKware Inc.	147	132
PKZip & UnZip by PKware Inc.	47	42
SQUISH PLUS by Sundog Software	100	90
SOZI by Symantec	100	90
Stacker by Stac Electronics	149	105

FILE TRANSFER

AllType by Atech	80	72
Brooklyn Bridge 3.0 by Fifth Generation	140	126
Common-Link by Pacific Micro	CALL	CALL
Copy II PC by Central Point Software	50	45
Copy II PC Deluxe Option Board	159	135
DeskLink by Travelling Software	170	153
Disk Dupe by Micro System Designs	79	71
Disk Dupe Pro by Micro Systems Design	179	155
Duplicator Toolkit Pro by Copy Tech.	129	116
Hijaak Release 2.0 by Inset Systems	249	189
MAC-IN-DOS by Pacific Micro	199	179
Magic Mirror by SoftLogic	100	90
OPTS (DOS Version) by System Design Assoc.	179	152
Perfect Exchange by Systems Compatibility	80	72
Software Bridge by Systems Compatibility	149	135

INSTALLATION

.RTPATCH by PocketSoft SPECIAL!	295	265
ddb by Knowledge Dynamics	150	129
Embarc Professional by Stingray Corp	299	269
Embarc Professional Deluxe Edition by Stingray Corp	399	359
EZ-INSTALL 4.0 by The Software Factory	249	224
INSTALL by Knowledge Dynamics	250	215
INSTALL PRO by Knowledge Dynamics	400	315
Install Boss by Kedwell	169	152
INSTALIT by Helpful Programs	149	119
INSTALIT w/ source by Helpful Programs	249	199
The Stork by Island Systems	175	158

LIST OURS

LIST OURS

LABEL MAKING

Label Matrix by StrandWare	479	431
Power Label by StrandWare	1249	1124
Quick Draw by StrandWare	259	233

MEMORY MANAGEMENT

386MAX by Qualitas	100	64
386VMM 4.1 by PharLap	295	265
Above DISC + by Above Software	119	107
AboveMEM 1.0a by Above Software	80	72
BlueMAX 6.0 by Qualitas	125	81
Boot Commander by V Communications	70	54
BOOTCON 1.6 by Modular Software Systems	69	55
Dr. Switch by Black & White	130	117
Dr. Switch Dev. Pak 2.0	180	146
Dr. Switch-ASE 2.0	80	72
Dynamic Memory Control 3.0 by Aldersparre	99	89
E-Mem by TeraTech	130	117
Headroom by Helix	49	44
LiteSwitch by Software Interphase	100	90
Memory Commander by V Communications	100	90
Memory Toolkit by Kandu Incorporated	79	69
Memorymate by Broderbund	70	63
NETROOM by Helix	80	72
OptiMem by Applegate	249	224
QEMM 386 by Quarterdeck	100	65
Scroll & Recall by OptiTech Data Processing	69	60
SmartMem by IDC	90	81
Software Carousel by SoftLogic	100	90
Switch-It by Better Software Tech.	100	89
TSRific by South Mountain	99	89
XMEM by Kandu Incorporated	149	134

MENU MANAGEMENT

MultiSpawn by Sub Systems, Inc.	199	179
PreCursor by Aldridge Co.	99	59
Tree86 4.0 by Aldridge	90	68

MULTI-PURPOSE

Dragnet by Attitash	100	90
EasyShare by Adisoft, Inc.	240	215
Mace Utilities 1990 by Fifth Generation	149	134
Magellan 2.0 by Lotus Development Corp.	149	129
MKS Toolkit by Morrice Kern Systems	249	205
Norton Commander 3.0 by Symantec	149	108
Norton Desktop for DOS	179	129
Norton Utilities by Symantec	179	115
Outside In DOS by Systems Compatibility Corp.	89	81
PC Tools Deluxe by Central Point	179	129
Vfeature Deluxe by Golden Bow	120	108
View It by V Communications	70	63
Vtools by Golden Bow Systems	50	45
XTree Gold by XTREE	149	109

OPTIMIZING

Cache86 by Aldridge Company	50	45
DCACHE by MicroWay	49	44
Disk Optimizer by SoftLogic	70	63
DS Optimizer by Design Software	70	63
FAST TRAX by BRIDGEWAY	70	63
NetOptimizer 2 by Ontrack	395	356
NOW! by TeraTech	89	80
OPTUNE by Gazelle Systems	100	90
PC-Kwik Power Pak by Multisoft	130	117
Super PC-Kwik	80	72
Vcache by Golden Bow Systems	60	54
Vopt by Golden Bow Systems	60	54

PRINTING

ColrTrax 1.0 by Blackhawk Data Corporation	99	90
Dan Bricklin's Page Garden by Lifeboat Software	99	89
Duet by Consumer Software	90	81
Freedom of the Press by Custom Applications	495	446
Go Script by Lasergo	195	175
Go Script Plus by Lasergo	299	269
Laser Control 3.3 by Insight Development	150	135
LaserPak 2.0 by Crescent Software	149	135
Pizazz Plus by Application Techniques	149	125
Print Cache by Laser Tools	149	134
PRINT Q by Software Directions	149	134
Printplot 2.0 by Insight Development	299	269
Printtools by Insight Development	129	116
PrintRite by Bloc Publishing	89	80
PrintVision by Bloc Publishing	69	62
Printworks by SoftStyle	70	63
Printworks for Lasers	145	131
PS-Print by Brightwork Development	395	356

SECURITY

Data Security Plus by PC Guardian	CALL	CALL
Disklock PC by Fifth Generation Systems	79	67
Dolphin Encrypt	195	176
Dr. Solomons Anti-Virus Toolkit by Ontrack Computer	150	135
Hardlock Computer Security by Sentry Software Corp.	49	41
SecretDisk II Administrator by Lattice	500	450
SecretDisk II by Lattice	125	113
Untouchable Network 10 User Starter Kit by Fifth Generation Systems	695	589
Untouchable Network Additional Nodes	70	59
Virus Prevention Plus by PC Guardian	125	106
WatchDog by Fisher International	295	266

SCREEN SAVERS

After Dark by Berkeley Systems	50	29
More After Dark	50	29
PYRO! PPC by Fifth Generation Systems	50	43

ADDITIONAL UTILITIES

Hypatia-Programmer's Tools by Semi-Sentient	120	103
MasterView by CodeWorks, Inc.	99	90

WINDOWS 3.1 COMPATIBLE UTILITIES

Cache86

The fastest, smallest, safest disk cache

- > Increase disk access speed to make your computer soar
- > Tiny memory use - as little as 1K of conventional memory
- > Write through and delayed write options
- > Uses any kind of memory you have—extended, expanded, conventional or high



The State of the Art Menu System with optional mouse support

- > Not memory resident
- > Network compatible
- > Multi-level security system and file management utilities
- > Computer usage tracking and reports



Tree86™

A powerful tool for disk and file management with optional mouse support. Network compatible.

- > Easy-to-use, intuitive interface
- > Instant access to single or multiple drives
- > Text search, move and kill subdirectories and files, find files, sort, tag, view and much more.



Excellence in Software AND Support

2500 City West Blvd., Suite 575, Houston, Texas 77042
713-953-1940

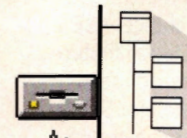
Make Fast Work Of Windows.

Norton Desktop For Windows

File Disk View Configure Tools Window Help

See what makes The Norton Desktop version 2.0 essential for Windows 3.1.

The Norton Desktop version 2.0 for Windows offers a new suite of features that fully optimizes Windows making it easier to use, and helping you be more productive.



A:



C:



Network

Drag a file or drive icon to any desktop icon or onto the desktop itself—for instant access.

Copy, move, delete, or print files by clicking buttons and icons.

We've integrated the File Manager directly onto the desktop, to simplify file and program management. To access files, just click on a drive icon. You'll get over 45 file viewers that allow

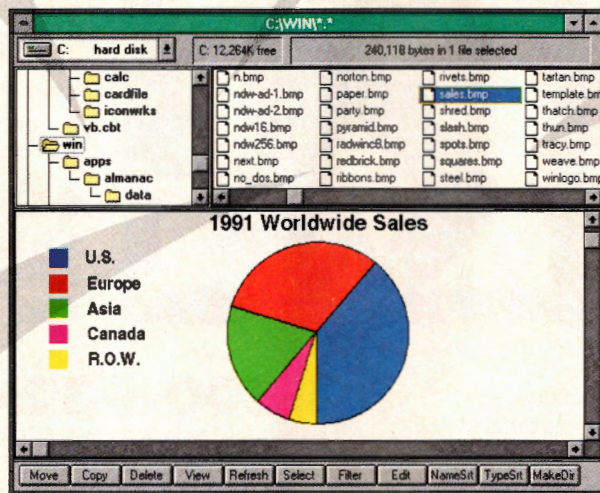


Frequently used applications and files can be placed on the desktop for convenience.

you to examine a file quickly and easily without pausing to load its application. And the customizable button bar puts often-used functions at your fingertips. It all happens quickly, too. Version 2.0 loads up to six times faster than version 1.0 for even better performance.

Watch Windows 3.1 sparkle.

Experience full drag-and-drop support across the entire desktop.



Double-click on a drive icon to see all your files in a movable, re-sizable window. Below is a view pane showing a spreadsheet or any type of file you wish to preview.



Keep your favorite Windows applications and files in a customizable icon tool bar.

The best Windows tools you can buy.

The Norton Desktop for Windows comes with a full set of utilities, including fast automatic backup; precision data recovery (with SmartErase™); comprehensive virus protection; and more.



SmartErase

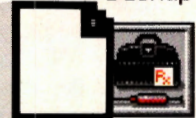


Printer#1



Backup

You get all the utilities you need to backup, protect, and repair your data.



AntiVirus

"I never run Windows without it"

Walter S. Mossberg, Wall Street Journal, 4/2/92

Because it works the same way as Windows, you'll see instant results.

And it's compatible with all DOS and Windows applications, and leading networks.

To see it, make a fast trip to your dealer. It's only \$179* (SRP), and it's backed with a 60-day money-back guarantee from the leader in quality utilities. Or call, 1-800-343-4714 ext. 779 to

- WHAT'S NEW**
- Faster load time
 - Full drag-and-drop across the entire desktop
 - Virus protection and repair
 - Windows text editor
 - Extended network support
 - Macro recorder
 - 15 new file viewers
 - Customizable fonts
 - Arrange Desktop
 - Tool Box view
 - Expanded tree directory

upgrade for just \$49,** or ext. 755 for information! **BONUS OFFER!** Buy The Norton Desktop version 2.0 for Windows and Windows 3.1 together before 6/30/92, and get a **FREE Symantec Game Pack** (\$39 value).***



SYMANTEC.

*Or call 1-800-554-4403 for an instant FAX Data Sheet (enter 750). ©1992 Symantec Corporation. *Suggested retail price in U.S. dollars. **Upgrade price for registered users—good in U.S. and Canada only. ***Offer good in U.S. and Canada only. International phone: Canada, 1-800-465-2266; Europe, 31-71-353111; Australia, 2-879-6577; others, 1-408-252-3570. All trademarks or registered trademarks are those of their respective holders.

DR. SWITCH-ASE™ 2 GIVES YOU THE POWER

Only Dr. Switch-ASE™ 2 gives you the power to take any size Clipper®, dBASE®, or FoxPro® application and turn it into a 13-19K RAM resident (TSR) program.

Power to Pop

Pop up any Clipper, dBASE or FoxPro application on top of any program. You can create a dBASE language TSR that pops up using one of five different hot keys. But that's just the beginning. Need the power to pop up a TSR at any time of the day or night, after an elapsed time or when the phone rings? You've got it with ASE 2's Alarm, Timer and Phone functions. Pop up mailing lists, order entry systems, BBS's, Contact managers or entire database environments. If you can program it, ASE 2 can pop it. ASE 2 takes any application idea that pops into your head and pops it up on top of another program. Pop it!

Power to Run

Run the largest programs directly from your Clipper, dBASE or FoxPro applications. ASE 2's powerful DOS shell swaps all but 13-19K of your application out of memory. This gives you the capability to run any program imaginable, directly from your dBASE language application. Say goodbye to messy screens because ASE 2's DOS shell can run your program or DOS commands in a window that you define. You can use the DOS shell by itself or combine it with the TSR capability. The Pop-n-Run™ feature gives you the power to run any program after you've popped up on top of another. Just think, you can create an application that pops on top of another program at 12:00 AM to run a backup or communications program. ASE 2 pops and runs circles around any other swapping utility. Run it!

Power to Play

Play back any series of keystrokes directly into your DBMS application or any other program. You can include cursor keys, function keys and real time pauses in the playback stream. You can also vary the playback speed to accommodate slow or fast programs. No sense in having power without flexibility. ASE 2 can playback the smallest

text string or the contents of a multi-mega-byte text file. You can't get any more serious about playing than this. Play it!

Power to Cut

Cut information right off any text screen. You can cut from your dBASE application or from any other program. ASE 2 includes the keyboard routines for manually highlighting text on the screen. Once defined, ASE 2 appends or replaces the cut text into the file of your choice. ASE 2 also includes a "Hot Shot" feature that allows you to pre-define a screen area. Using the Hot Shot feature you just press the cut key and transparently grab a portion of the screen. As you can see we didn't cut any corners with our cut capability. Cut it!

When you need power to pop it, run it, play it and cut it, ASE 2 delivers it!

**GET POWERFUL.
CALL TOLL FREE
AND ORDER
ASE 2 TODAY!**

1-800-932-9202

NY state, Canada and overseas call 1-212-666-4030.
For FAXter action call our Fax number at 1-212-666-3752.

Want to see power in action? Call and ask for a free demo disk.

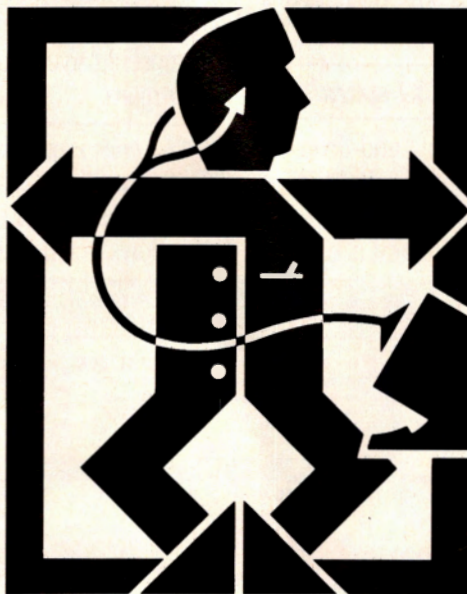
DR. SWITCH-ASE™ 2
\$179.95*†

Supports: Clipper® SU87-5, dBASE® IV, and FoxPro® 2



Black & White International Inc.
50 West 106th Street
Suite 1C
New York, NY 10025-3819

Dr. Switch, Dr. Switch-ASE, ASE 2, and Pop-N-Run are trademarks of Black & White International, Inc. All others are trademarks or registered trademarks of their respective holders.
* Plus Shipping/Handling: U.S. orders add \$7.00 for 2nd Day Air, \$4.00 for Ground. Canadian and Foreign orders add \$8.00. COD add \$4.00. NY residents add sales tax. All payments U.S. funds/U.S. Banks only!
† Includes royalty-free runtime version. © 1992, Black & White International, Inc.



UTILITIES

OS/2

DIALOG BOXES

DbxSHIELD by Stirling Group 595 535

INSTALLATION

EZ-INSTALL for DOS & OS/2 by Software Factory 449 404
EZ-INSTALL for OS/2 by The Software Factory 349 314
INSTALLIT (DOS/OS/2) w/ source by HPI 249 225
InstallSHIELD for OS/2 by The Stirling Group 595 535
RTPATCH by PocketSoft 295 265

MEMORY MANAGEMENT

MemSHIELD by The Stirling Group 595 535

MULTI-PURPOSE

MKS Toolkit (DOS & OS/2) by Mortice Kern Systems 399 325
MKS Toolkit (OS/2) by Mortice Kern Systems 349 285
Thompson Toolkit (DOS & OS/2) 199 179
by Thompson Automation 249 224
Thompson AWK Compiler by Thompson Automation 299 269

ADDITIONAL UTILITIES

AutoRun by AutoSoft 150 135
GammaTech Utilities for OS/2 125 113
TCXL-OS/2 by Innovative Data Concepts 295 266
Wide Angle for OS/2 by Attitash 129 95

WINDOWS

BACKUP

Distinct Backup for Windows by Distinct Corp. 129 116
Fastback Plus Windows by Fifth Generation Systems 189 169
Fastback Plus Windows Express 1.0 99 85
Norton Backup for Windows 2.0 by Symantec 149 108
SitBack for Windows by SitBack Technologies 99 89

DIAGNOSTICS

WinSleuth Professional by Dariana 169 152

DISK MANAGEMENT

BeckerTools for Windows by ABACUS 130 117
Direct Access Windows by Fifth Generation Systems 99 85

FORMS MANAGEMENT

PerFORM Design and Filler-Windows by Delrina 149 134
PerFORM PRO-Windows by Delrina 295 266

FILE TRANSFER

HiJaak for Windows 249 189
MAC-IN-DOS/Windows by Pacific MicroElectronics 199 179
Outside In for Windows by Systems Compatibility Corp. 89 69

INSTALLATION

INSTALLIT for Windows 199 179
INSTALLIT for Windows w/ source 299 269

KEYBOARD

ProKey for Windows 99 89

MEMORY MANAGEMENT

BlueMAX 6.0 by Qualitas 125 81

MULTI-PURPOSE

Norton Desktop for Windows 179 129
WinMaster by PC-Kwik Corp 60 54

NETWORKING

Distinct TCP/IP for Windows 495 446
Windows Workstation by Automated Design Sys. ... CALL CALL

SCREEN SAVERS

After Dark for Windows 50 28

SECURITY

Certus by Foundation Ware 189 170
Dolphin Encrypt 195 176
Hardlock Computer Security by Sentry Software Corp. 49 41
WatchDog by Fisher International 295 266

TEXT RETRIEVAL

ZyINDEX for Windows by Zylab 295 266

BOOKS

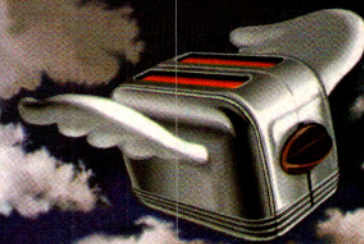
Advanced C: Tips & Techniques 20 18
Borland C++ Object-Oriented Programming 30 27
Borland C++ Programmer's Guide to Graphics 30 27
Developing Windows Applications with Borland C++ 30 27
Developing Windows Applications with SDK 30 27
DOS Programmer's Reference, 3rd Edition 30 27
Learn Programming Today w/Turbo Pascal by Borland 70 63
Mastering Turbo Pascal 30 27
Object-Oriented programming in C++ 30 27
Paradox Prog. Guide by Pal by Example 68 61
Programming in C, Revised Edition 30 27
Upgrading to MS DOS 5 15 14
Upgrading to MS Windows 3.1 by Microsoft Univ. 39 35
Using Microsoft Windows 3 25 23
Using MS DOS 5 25 23
Using Norton Utilities 6 25 23
Using Turbo Pascal 6 30 27
VB=mc² by ETN Corp. 40 30
Waite Group's C Programming Using Turbo C++ 30 27
Waite Group's MS DOS Bible 30 27
Waite Group's Turbo C++ Bible 30 27

LIST OURS

After Dark 2.0

for Windows

THE ULTIMATE SCREEN SAVER



Over 40 displays
to prevent phosphor burn-in.
Dazzling new graphics.
Flying Toasters and
fantastic tropical fish.
Digital sound effects.
WallZapper™
instant wallpaper creator.
Company logo
and message display.
Astounding.

HiJaak®

for Windows

Graphics Conversion
Graphics Viewing
Graphics Printing
Graphics Processing
Screen Capture



See complete product
description under the
Windows Graphics section.

Inset Systems
71 Commerce Drive
Brookfield CT 06804-3405



BERKELEY
SYSTEMS
2095 Rose Street
Berkeley, CA 94709
(510) 540-5535



What can I do with dANALYST Gold 7.0?

350+ ICONS



SUPPORTS C & C++ FOR WINDOWS



C & C++ COLOR ANALYSIS

C & C++ COLOR SOURCE

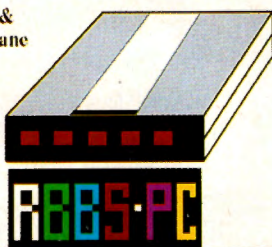
CODE ANALYSIS

```
10 hypedel int ArrayType;
11 int binary(x,y)
12 {
13   ArrayType = 1;
14   {
15     int low = 0, high, mid;
16     high = n - 1;
17     while (low < high)
18     {
19       if (hi_less(x,y,mid))
20         high = mid - 1;
21       else
22         low = mid + 1;
23     }
24     return (mid);
25   }
26 }
```

BULLETIN BOARD

660 Meg Of Applications & Source

Shareware &
Public Domane
Available
To
Gold 6.0
Users
From Our
BBS
300 - 9600
Baud



CAPTURE DOS & WINDOWS



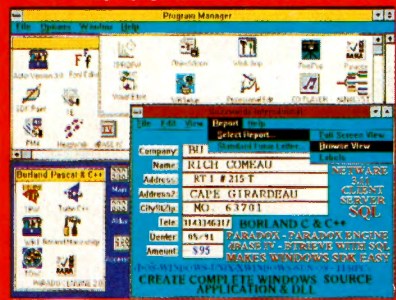
XBASE COLOR ANALYSIS

XBASE COLOR SOURCE

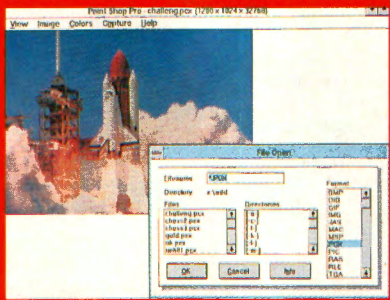
CODE ANALYSIS

```
10 #INCLUDE CLIPHEAD
11 USE MINIMAX INDEX MINIMAX
12 IF .NOT. EOF()
13   SET INDEX TO FUN
14   ENDIF
15   DO CASE
16     CASE ANSWER = "1"  && SET YOUR OWN COLORS
17       DO REINDEX
18       CASE ANSWER = "2"
19         DO PACK
20     END CASE
21   IF YN = "Y"
22     IF RECDN() = 10533
23       ? "I Need dANALYST To Make Programming Fun & Easy"
24     ENDIF
25   ENDIF
26 <<<< RETURN
```

DBMS SCREEN PAINTER



GRAPHICS FILE CONVERTER



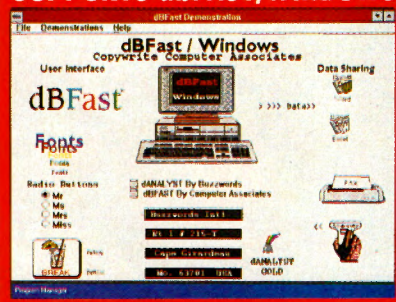
PARADOX COLOR ANALYSIS

PARADOX COLOR SOURCE

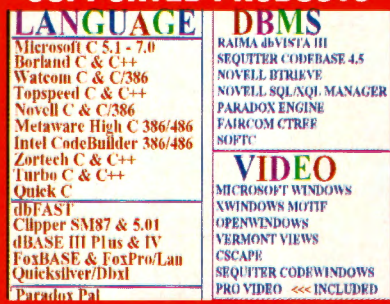
CODE ANALYSIS

```
10 . APPEND TO DATABASE
11 PROC ap_append()
12 PRIVATE db, l, i
13 COEDITKEY
14 IF REMAGE RECORDS() > 0 THEN
15   END
16   DOWN
17   CTRLHOME
18   ENDIF
19   WHILE (c < ApFlum())
20     i = ApFlum(db) + 1
21     i = i
22   ENDWHILE
23   PAINTCANVAS FILL " " ATTRIBUTE Ap_Cmmbar
24   DO ITI
25   <<<< RETURN
26 ENDPROC
```

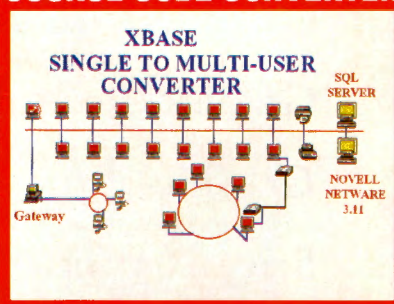
SUPPORTS dbFAST/WINDOWS



SUPPORTED PRODUCTS



SOURCE CODE CONVERTER



dNANALYST® Gold 7.0 Supports:

- Microsoft Windows
- DOS Character
- UNIX Platform
- Character
- X Windows



Call for more detailed information!

BUZZANOWUS
INTERNATIONAL, INC.
Rt. 1, #215-T • Cape Girardeau, MO 63701
314-334-6317 FAX 314-334-0794



Best Buys at Programmer's Paradise®!

BRIEF

Borland International

Best-selling programmer's editor for PC programmers with mouse support, EMS caching, redo and undo. Program faster and more productively with multiple windows, built-in support for 42 compilers, template editing, smart indenting, complete search/replace and total keyboard configurability, editable keystroke macros, C-like macro language with source-level debugger and more.

List: \$249

\$95



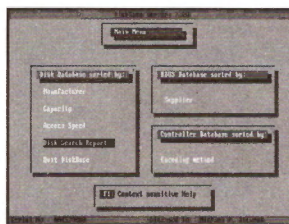
DiskBase 4.0

Landmark Research Int'l Corp

If you install, upgrade or maintain hard drives, DiskBase will save you time and money. DiskBase reveals 13 specs on over 2700 hard drives, including jumper settings, IDE capacity calculator, and more. Also, 8 specs on over 220 controllers, and hard disk settings for 22 different BIOS manufacturers.

List: \$99

\$79



We are the world's leading source of software development tools and utilities.

- **Latest Versions:** We ship only the newest programs.
- **Huge Inventory & Fast Shipment:** Typically, orders placed before 2 pm for products in stock will go out the same day.
- **Knowledgeable Sales Staff:** We can help you select the products that will best suit your needs.
- **Special orders:** We can locate and deliver hard-to-find programs and still offer a discount!

WinGEN & dANALYST Gold Bundle

Buzzwords International, Inc.

**BEST PRICING on
Buzzwords products anywhere!**

WinGEN is an object-oriented WYSIWYG Source Code Generator entry tool for Windows versions of dBase, Paradox, C/C++ and Turbo Pascal. dANALYST Gold is a complete multi-user development environment for the C programmer: with 350+ icons, Source Code Converter, DBMS Screen Painter and much more!

List: \$644

\$149

BUZZWORDS®
INTERNATIONAL, INC.

GFA-CAD for Windows

GFA Software Technologies



For the occasional user: a "point-and-click" interface with access to all drawing functions, "On-line

Help," and hundreds of architectural, mechanical & electrical symbols. For professionals: up to 16 layers, auto-dimensioning, auto-snap layers, and calculated or reference positions.

List: \$99

\$89

This unique catalog is updated and mailed quarterly to hundreds of thousands of Programmer's Paradise customers. If this is the first time you have received this catalog, please see the circulation information on the following page to continue receiving future issues.

Also, look for our advertisements each month in *Byte*, *Computer Language*, *Dr. Dobbs Journal*, and *DataBased Advisor*.

ED, The Programmer's Editor for Windows

Lifeboat Software

At last! A full-featured Windows-based programmer's editor is here! *ED, The Programmer's Editor* is setting the standard with features like background compilation, hypertext function lookup, "smart" language-specific editing, a fast "C" extension language, and more! Call today and discover the tool of the 90s.

List: \$269

\$199



DESQview/X

Quarterdeck Office Systems

Efficient windowing, pre-emptive multitasking, DOS and Microsoft Windows compatibility, memory management, data transfer and keystroke macro capabilities. DESQview/X is based on the X Window System. It's an international, multi-vendor standard. Create macros for each program or to go between programs. Create X Window graphic programs for DOS FAST.

List: \$275

\$189



O R D E R F O R M

Call toll-free:
(800) 445-7899 or (908) 389-8950
Fax: (908) 389-9227

Programmer's Paradise®

1163 Shrewsbury Avenue, Shrewsbury, NJ 07702

Mon.-Fri.: 8:30 am-8 pm
Sat.: 9 am-2 pm

Send to:

Bill to:

Name	Name
Company	Company
Address	Address
City/State/Zip	City/State/Zip
Telephone FAX	Telephone FAX

Method of Payment:

- ☐ Credit Card (circle one) VISA MC AMEX Card Acct. # _____
Exp. Date: ____/____ Signature X _____
- ☐ Check: Please make checks payable to Programmer's Paradise.
- ☐ Purchase Order # (Please attach copy of P.O.) _____ Terms _____
Ship via _____ (Prior approval for US accounts only)

**COPY
THIS
FORM AS
NEEDED.**

Qty.	Product	Format	Unit Price	Ext. Price



Programmer's Paradise®
A Division of Voyager® Software Corp
(800) 445-7899
International: (908) 389-9228

Customer Service: (908) 389-9229
Corporate Accounts: (800) 422-6507
Dealers: (800) 847-7078
Int'l Dealers: (908) 389-8950

Shipping
Tax
TOTAL

Mail or FAX orders: Purchase Orders by mail or fax are welcome from qualified US accounts. Provide daytime phone and street address.

Payment: Visa, MC or AMEX (with no surcharge), COD, prepayment by personal checks and net 30 terms to qualified accounts. New accounts, please provide bank information and trade references.

International orders: Phone number required on all FAX orders.

Sales Tax: NJ/NY residents add applicable sales tax.

Shipping: \$6 domestic shipping and handling charges. Over 15 lbs. will be charged actual UPS ground rates. Domestic COD—add \$4. Rush and international service available at prevailing carrier rates.

Return Policies: See page 75 of catalog.

Please send any mailing list additions/changes/deletions with mailing label to:

PP Circulation
1163 Shrewsbury Ave.
Shrewsbury, NJ 07702



WinGEN™

For Windows 3.1 or NT, OS/2 2.0 & UNIX V Rel. 4

THE EASIEST WAY TO CREATE GUI APPLICATIONS FOR BORLAND LANGUAGE PRODUCTS

Create 16 or 32 bit GUI database applications in only minutes. The ultimate GUI Source Code generator for all Borland Language Products.

IMAGINE THE BENEFITS

- Create Portable Source Code for Windows, OS/2 or UNIX- applications that are operating system independent.
- Convert existing ObjectVision .OVD files to Source Code.
- Build database GUI front ends easily.
- Connect new apps to your existing data quickly.
- Improve Programming Standardization practices.
- Fast development lets you incorporate end user quickly.
- Source Generation for Borland Language Family.
- Create royalty free apps.
- Screen capture any res.
- No ObjectVision title bar! Just your forms are displayed.
- Fully visual WYSIWYG screen designer or painter.
- Sample apps source included.
- DDE / DDEML / OLE support.
- Run apps at compiled speed not interpreted speed.
- Object oriented source code generation.

WinGEN™ Supports:

- dBase for Windows
- C for Windows
- CPP for Windows
- Turbo Pascal for Windows
- Paradox Engine

Convert ObjectVision .OVD Apps to Source Code Or Create New Apps from Scratch!

Create new applications with WinGEN™
extensive design tools.

Create applications for the Borland Family of
Languages.

Familiar ObjectVision Interpreted forms can be migrated to High Speed
Borland Compiled languages.

INSTANT APPLICATIONS

You can convert any existing OBJECTVISION application to source. New programs can also be created by simply drawing your interface, add your logic using *Decision Trees*, and connect to the data base of your choice using one of the BORLAND Language Products.

DRAW YOUR USER INTERFACE

Creating new applications with WinGEN™ is easy using the WYSIWYG designer. Portable Object Oriented programming is taken to new heights with the advanced Object

Screen/Form design aids. Object Properties can be added or changed at any time during application creation.

BUSINESS LOGIC CONNECTIVITY

Apply you own business logic using easy to understand Graphical Decision tree Logic. Calculate field values, specify actions, or run other applications.

WinGEN™ IS FOR DEVELOPERS

Programmers can take full advantage of their language's potential. Create operating system independent applications. Programs can execute Interpretive ObjectVision style of apps using High Speed Borland Compiled Languages for the ultimate in GUI performance.

WinGEN™ WYSIWYG

Screen Designer

or

WinGEN™ DBMS App Designer

BUZZWORDS®
INTERNATIONAL, INC.

Rt. 1 Box 215-T

Cape Girardeau, MO 63701

314-334-6317 • FAX 314-334-0794

UNIX DEVELOPMENT SOFTWARE

LANGUAGES

	LIST	OURS
CL C++ by Computer Innovations	595	535
Cobol/2 for Unix w/Toolbox by Micro Focus	4250	3399
Cobol/2 for AIX w/toolbox	CALL	CALL
FTN77/IX by Eurosoft	1350	1199
IntegrADA by Aetech	1995	1895
IntegrADA/POSIX	1995	1895
Intek C++ by Intek	495	459
LPI- BASIC w/CodeWatch debugger	895	525
LPI- C++ w/CodeWatch debugger	1295	CALL
LPI- COBOL w/CodeWatch debugger	1295	CALL
LPI- FORTRAN w/CodeWatch debugger	1295	CALL
LPI- C w/CodeWatch debugger	895	CALL
LPI- PASCAL w/CodeWatch debugger	1295	CALL
LPI- PL/1 w/CodeWatch debugger	2995	CALL
MetaWare High C by MetaWare	895	849
MetaWare Professional PASCAL	895	849
Micro Focus COBOL/2	3000	2399
Microsoft BASIC Compiler	695	629
Microsoft COBOL	1250	950
Microsoft FORTRAN	695	525
Microsoft Pascal	695	525
NDP C-486 by MicroWay	1195	999
NDP C-860	1995	1675
NDP C++ 386/486	1195	1015
NDP C++ 860	1995	1675
NDP FORTRAN-486	1195	1015
NDP FORTRAN-860	1995	1675
NDP Pascal-486	1195	1015
NDP Pascal-860	1995	1675
RM/COBOL Developer Pack by Liant Software	2400	CALL
RM/COBOL-85 Development System		
RM/CO* Development Environment		
RM/COBOL-85 Development System	3600	CALL
RM/CO* Development Environment		
RM/COMPANION Report Writer		
RM/PANELS Screen Management System		
RM/COBOL Development Pack	300	CALL
RM/COBOL Run-time System		
RM/COBOL Development Pack+	800	CALL
RM/COBOL Run-time System		
RM/COMPANION Run-time System		
SVS C by Silicon Valley	725	655
SVS BASIC-Plus	625	565
SVS FORTRAN-77	825	745
SVS PASCAL	725	655
Zortech C++ UNIX 386 by Symantec	CALL	CALL
w/source code	CALL	CALL

DATABASES/FILE MGMT.

	LIST	OURS
APOGEE 4GL/DBMS by Binary Research	CALL	CALL
Btrieve by Novell	595	459
C Data Manager by Database Technologies	CALL	CALL
C-Index/PLUS by Trio Systems	395	329
C-ISAM by Informix	250	209
c-tree Plus by FairCom	595	459
Code Base 4.5 for UNIX by Sequiter	495	CALL
dANALYST GOLD by BUZZWORDS	695	CALL
db FILE by Raima	CALL	CALL
FairCom SQL Server 1-5 Users	495	399
6-12 Users	995	799
Unlimited Users	1495	1099
FairCom Toolbox	795	613
FairCom Toolbox Professional Edition	1295	899
FilePro Plus (1-5 users) by The Small Computer	1595	1359
FoxBase+ (286) by Fox Software	995	849
FoxBase+/386	995	849
Informix Products	CALL	CALL
q*BASE	299	269
q*BASE EXE by Knowledge Information Sys.	1299	1169
R&R Report Writer by Concentric Data Sys.	495	415
r-tree Report Generator by FairCom	295	235
Snow Report Writer-UNIX by Snow Software	1095	1039

EDITORS

EDIX (286) by Emerging Technology	275	259
EDIX (386)	425	399
EDT+ 286 by Boston Business Comp.	395	349
EDT+ 386 by Boston Business Comp.	495	439
EDIT* 2000 by Computer Innovations	395	CALL
EMACS by Unipress	395	315
Epsilon by Ligan	250	199
ME TEXT EDITOR by Magma	390	339
VEDIT PLUS by Greenview	285	239
VI Plus by Unipress	645	575

SCREENS

C++/Views by Liant	1495	1199
C-scape 3.2c for UNIX by Liant	1499	1199
V/386 Version	1499	1199
Greenleaf DataWindows UNIX 286/386	1395	969
for UNIX 486	2145	1679
Menuet by Autumn Hill	650	559
PANEL Plus II by Roundhill	495	419
w/source	119	999
Vermont Views & Designer	1795	1515
Vermont Views Designer	595	539
XVT for UNIX 386 by GSS	395	349

SHELLS

	LIST	OURS
Korn Shell by Aspen	195	135
Looking Glass by INTERACTIVE	595	539
QuickShell by Unipress	395	362
Xshell by Expersoft	6900	5519
VCL by Boston Business Comp.	495	449

TESTING TOOLS

SQA: Manager for UNIX - Single user	995	979
SQA: Manager for UNIX - Networked Version		
Up to 5 Users	4500	CALL
Up to 10 Users	8000	CALL
Up to 20 Users	12000	CALL

ADDITIONAL PRODUCTS

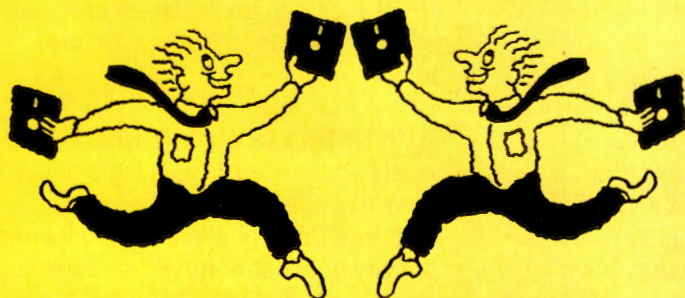
BAR-ONE Pipe UNIX/XENIX by Vertical Tech.	495	449
BAR-ONE Professional	695	629
BLAST II by BLAST/Comm. Research	250	179
C-terp by Gimpel	398	299
COBOL/2 for UNIX w/Toolbox by Micro Focus	1500	1199
DEBUG 2000 by Computer Innovations	595	535
Dialog System for PS/2 AIX Models 70, P70, 80	1500	1449
FLEXLINT	395	349
GSS'X/386 By Graphic Software	695	589
Interwork by Block Island	329	299
Interwork Concurrent Prog. Tikt. for UNIX by BI	369	329
Linpac.h++ 1.1 Unix Workstation,		
w/source by Rogue Wave	395	359
M++ by Dyad	695	629
w/3 modules	1150	1039
w/5 modules	1450	1309
M++LSM by Dyad	245	219
M++Optim by Dyad	245	219
M++Quad by Dyad	245	219
M++Sum	245	219
M++Test	245	219
MathCAD by MathSoft	695	559
Matrix.h++ 1.1 Unix Workstation w/source	495	449
MKS RCS 5.2 by Mortice Kern	349	299
Mousewrapper.h++ 1.0 Unix Workstation,		
object w/source by Rogue Wave	495	449
Opt-Tech Sort by Opt-Tech DP	249	225
PGL Toolkit/UNIX w/source code	995	895
Poet by BKS	1499	CALL
PRO-C by PRO-C Ltd.	995	899
Multi-user	1000	CALL
RM/CO* by Liant	1000	CALL
RM/PANELS by Liant	500	CALL
RM/COMPANION by Liant	1000	CALL
SVS DBG by Silicon Valley	325	295
TCXL-UNIX by Innovative Data Concepts	395	349
Toolbox for PS/2 Models 70, P70, 80	1500	1449
Tools.h++ w/Templates 5.0 Unix Workstation		
w/source by Rogue Wave	395	359

Need more information?

Product Descriptions
Pages 75-170

AT LAST!

**UNIX users can interface
with Mac and DOS**



OPTS™

converts UNIX to/from Mac and DOS

OPTS, an easy-to-use app, converts documents from UNIX troff, nroff or mm macro format into RTF file interchange format...or vice-versa. No time-wasting hand conversion! And, yes, OPTS does tables. All for \$179 + S&H! Order from us by mail, phone or FAX or from your local dealer. 30-day money back. NJ residents add sales tax. Do it now.

NEW! OPTS for UNIX System V & SCO XENIX.
Call for information and pricing.

S. D. A. Enterprises, Inc.

1465 State Rt. 31, Annandale, NJ 08801-3128
Phone (908) 730-7677 . FAX (908) 730-6966

Dealers meet...

**LIFEBOAT
DISTRIBUTION
SERVICES**

Lifeboat Distribution Services provides a wide variety of development, science engineering and otherwise hard-to-find software products to thousands of dealers servicing technical markets.

Lifeboat sells to thousands of dealers throughout the United States. Lifeboat International also supports an extensive international dealer network.

France (800) 847-7078
Denmark (908) 389-8950
Italy
Spain
Switzerland
Japan
USA
England
West Germany
Canada
South Korea
The Netherlands

LIFEBOAT®

proudly welcomes

ED-The Programmer's Editor



*The
Programmer's
Editor*

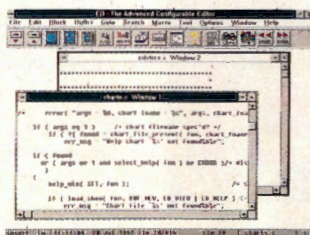
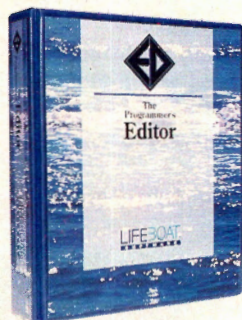
Lifeboat is proud to announce its newest product, **ED-The Programmer's Editor** for Windows and DOS. **ED** is setting the standard for developer's editors in the 90's with its unique combination of powerful features, ease-of-use, and availability under both Windows and DOS.

ED for Windows represents the forefront of today's development technology—combining the features programmer's need with the ease of use of a true Windows application — icon toolbar included.

Lifeboat Software is committed to bringing programmers leading edge tools that work in the real world. **ED** fits this mold well—it enhances a programmer's productivity immediately by letting him focus on programming rather than the mechanics of editing code.

For more information on **ED-The Programmer's Editor**, see our display ad on page 147.

See our new and current product offerings on the following pages, and watch for more new products in the coming year from Lifeboat Software.



**ED-The
Programmer's Editor**

**Dan Bricklin's®
Demo II**

/*resident_C*/

BreakOut-II

C Utility Library

**Essential B-Tree
for Windows**

**Essential
Graphics Chart
for Windows**

Essential B-Tree

**Essential
Graphics Chart**

**Essential
Graphics GUI**

**Essential
Graphics Kernel**

Hold Everything

TSRific

**John Bickart's
CBT Tool Kit**

**John Bickart's
Clip Art**

**John Bickart's
Starter Kit**

PLink86+

PolyLibrarian

TimeSlicer

**Advantage
Disassembler**

LIFEBOAT®
SOFTWARE

1163 Shrewsbury Avenue
Shrewsbury, NJ 07702
(800) 447-1955 • (908) 389-0037

To order, call (800) 447-1955



C Tools that Shape the Things to Come.

The communications library that speaks your language.

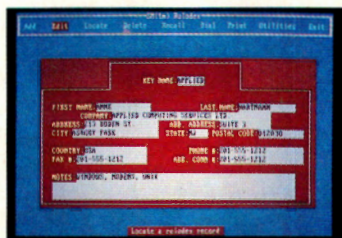


Essential Communications version 4.0

Essential Communications is a robust library of functions for communicating between PCs and any RS-232 device.

Features:

- CTS and/or DSR hardware handshaking and XON/XOFF protocols
- NS16550 UART FIFO support
- ANSI and VT52/100 terminal emulation
- Kermit, ZMODEM, XMODEM, YMODEM and YMODEM-g transfer protocols
- Compatibility with most multiport I/O boards
- V.32, MNP and Hayes compatible modem support.



The Professional C Programmer's library. C Utility Library version 5.0

The C Utility Library is a complete, up-to-date and versatile C programming library of over 400 functions for both the experienced and novice C programmer. Includes:

- Screen painter and code generator
- File backup utilities
- Window editor/file browser
- Multiple overlaid windows
- List boxes & file boxes
- Integrated mouse support
- Shadowing capabilities for menus.

The database management library

Essential b-Tree version 2.0

Few things in life are truly essential. But if you create custom databases in C, the Essential B-Tree database management library is an indispensable tool for building that dream DB application. You have complete control over your data with Index Sequential Access Method (ISAM) routines. And now, Essential B-Tree is Unix and Windows compatible for even greater portability. Features include:

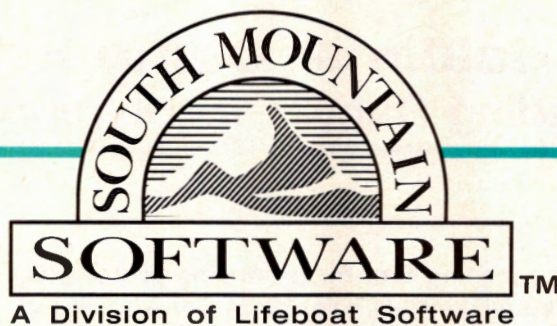
- Fastest access method available
- Fixed and variable length records
- Records up to 64K bytes
- Automatic file and record locking/unlocking
- Support for single/multi user & network databases.

LIFEBOAT
SOFTWARE

1163 Shrewsbury Avenue
Shrewsbury, NJ 07702
(800) 447-1955 • (908) 389-0037

**Call for
pricing**

To order, call (800) 447-1955



A Complete Set of Graphics Tools

Essential Graphics Kernel Library version 4.0

Essential Graphics Kernel is a fast, powerful and reliable toolkit for creating today's demanding graphics applications.

Features include:

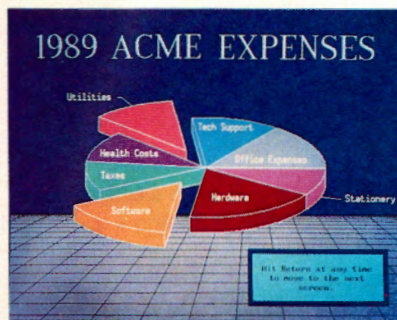
- Over 250 functions
- World coordinates and viewpoints
- Save screens to EMS or disk
- CGA, EGA, VGA, Super VGA and VESA, MCGA, 8514, and Hercules support
- Virtual printer driver for EMS, RAM or disk
- PCX imaging ...and more!

Essential Graphics GUI version 1.5

Essential Graphics GUI is a C programming toolkit for creating graphical user interfaces. It provides an easy-to-use yet powerful selection of user interface objects. Requires Essential Graphics Kernel.

Includes:

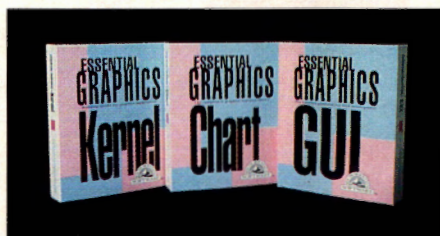
- Pop-up, pull-down, vertical and horizontal menus
- Data entry objects
- List and prompt boxes
- Radio buttons, percent bars, boolean objects and more



Essential Graphics Chart Library version 4.0

Essential Graphics Chart provides a complete set of 2-D and 3-D charting functions. Requires Essential Graphics Kernel. Includes:

- True 3-D charting with multi-view and multi-perspective screen output
- 2-D bar, line, pie, High-Low-Close, Above/Below, and scatter charts
- 3-D bar, pyramid, octahedron, pie, above/below charts
- Total control over all chart elements
- Multiple graphs per screen
- Variety of label and legend types



**Call for
pricing**

To order, call (800) 447-1955

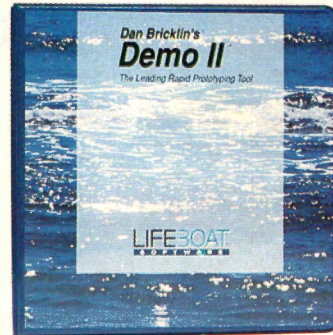
LIFEBOAT®
SOFTWARE

1163 Shrewsbury Avenue
Shrewsbury, NJ 07702
(800) 447-1955 • (908) 389-0037

Dan Bricklin's® Demo II™

The Leading Rapid Prototyping Tool

Demo II™ is the leading tool for producing prototypes, demonstrations, and tutorials. It can be used in a quick and simple fashion by drawing screens and displaying them like slides, or the advanced features can be used to construct prototypes that respond and behave like the real programs.



"What sets Demo II apart is its unique combination of simplicity and the power you need to make your prototype look, act, and feel like the real thing!"

—Dan Bricklin
Co-creator of VisiCalc

"When it comes to explaining software, there's nothing better than Demo II."

—Tom McLaren
Principal
McLaren Associates

"Demo II is by far the best tool out on the market for prototype and demonstration development."

—Doug McGregor
Pres., Athletic
Technologies

Prototyping

Demo II is the world's most popular prototyper, because it's quick and easy to design screens, menus, and other application elements. Applications are sure to satisfy users by letting them use a functional prototype — without writing a line of code.

Tutorials and Demonstrations

Demo II builds tutorials quickly, because a screen only needs to be created one time. All actions, edits and explanations are done with overlays.

The powerful sequencer provides over 100 run actions to control the flow of your tutorial. Your tutorial responds to key presses, modifies and tests variables, produces sounds, and a host of other operations and actions.

Computer-Based Training (CBT)

Demo II includes advanced features such as branching for navigation, review, remediation and testing. The result is a fully capable authoring environment for building CBT systems that range from the enormously complicated to the quick and simple.

Features include:

- Mouse Support
- VGA, CGA, EGA & Hercules Support
- Autosave
- Text overlay on bitmapped graphics
- CUA feature and templates.

LIFEBOAT
SOFTWARE

1163 Shrewsbury Avenue
Shrewsbury, NJ 07702
(800) 447-1955 • (908) 389-0037

SRP:
\$249

To order, call (800) 447-1955

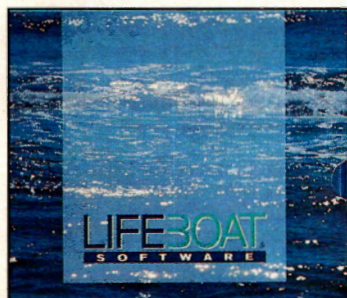
Join the thousands of satisfied users of Demo II and become more proficient and effective in creating your prototypes, demonstrations, tutorials and CBT systems today!

Professional version

The Professional version includes the ability to encrypt files so they cannot be modified by unauthorized users and removes the Lifeboat Software notice from the beginning of the demo. Upgrade pricing is also available for current users of Demo II.

"Demo II is the only program that will work in our environment...it has been so successful for us because of its simplicity."

—Margaret Sweeney
CBT Developer
Shearson Lehman
Brothers



John Bickart's Starter Kit for Demo II™

Tap into the real POWER of Demo II!

Demo II™ has many powerful features. It has many options. There are so many productive ways you can use it. How do you tap into this power?

With John Bickart's Starter Kit!

- Understand and realize the full capabilities of Demo II
- Review working examples of Demo II files
- Modify pre-built templates for your applications
- Learn all the key features rapidly with live tutorials.

Make the most of your investment in Demo II, in the shortest period of time, by buying John Bickart's Starter Kit for Demo II.

Features include:

Advanced Templates

Sales Demo, Mainframe Simulation, CBT Tutorial, On-line Help System, Forms Screen, Workstation Menus and more.

Self-guided Tour

See how Demo II really works!

My First Project Guide

Detailed instructions on how to get your first Demo II project completed including key by key references.

Quick Reference Guide

Files, Macros, Shortcuts and Overlays

Tutorials

Eight light, rapid demos of every feature of Demo II including screen design, run actions, block operations, macros, overlays, variables, I/O and images.

SRP:
\$99

LIFEBOAT
SOFTWARE®

1163 Shrewsbury Avenue
Shrewsbury, NJ 07702
(800) 447-1955 • (908) 389-0037

To order, call (800) 447-1955



TSR at your Fingertips

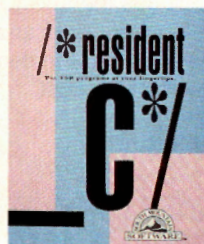


TSRific version 1.0.

The multilingual tool for TSR development. TSRific is the toolkit you need for developing memory efficient and reliable TSRs. It takes just

one function call to turn your program into a powerful TSR.

- Swaps to XMS, EMS, or disk
- 14K maximum RAM used regardless of TSR size
- Saves/Restores text and graphics
- User definable Hotkey
- Compatibility with Borland C/C++, MS C, Pascal, dBASE, Clipper, Foxpro BASIC and more
- Automatically handles interrupt conflicts
- No royalties.



/*resident_C*/ version 4.5.

/*resident_C*/ is a C library which enables you to make your C code memory resident as an ISR or TSR. One function call turns

your C program into a TSR.

- Keeps only 4K of the TSR in memory
- Activated by key stroke or timer
- Includes super keyboard stuffer
- Communicate between TSR and foreground programs
- Allows background processing
- Includes complete source code.

Swap any DOS program— anytime, anywhere.



Hold Everything

With this latest version, if you can write the code, Hold Everything can swap it out of memory. One function call swaps your program out to XMS, EMS, or disk with all but 10K of available memory free for another application to use.

- Saves/Restores Video Mode and Video Page
- EMS support
- Returns error level of last child program
- Up to 127 character command line
- Unique temporary files and multiple temporary file paths
- Built-in Fatal Error handling
- Includes complete source code.

LIFEBOAT
SOFTWARE

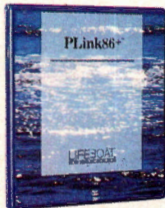
1163 Shrewsbury Avenue
Shrewsbury, NJ 07702
(800) 447-1955 • (908) 389-0037

**Call for
pricing**

To order, call (800) 447-1955

Professional Development Tools

The Industry Standard Overlay Linker

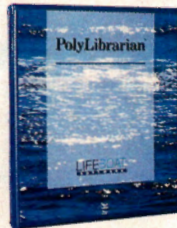


PLink86+ is an MS-DOS linker and overlay manager for Intel 80x86 processors that lets developers create and manage

programs that are much larger than available memory. The memory requirement is reduced because modules can share memory locations and overlay each other during execution.

- Programs up to 16MB can run in as little as 192K
- Allows your program to run on the widest possible variety of PCs
- Caches overlays in memory, including extended and expanded memory
- Up to 4,096 overlays
- Up to 65,536 program description objects
- Link MS-DOS executables in the background under OS/2.

The Premier Object Module Librarian



Polylibrarian can create object code libraries with any language that produces object modules that can be linked with PLink86+, the

OS/2 and Windows linker, MS Link or a compatible linker. Key features include:

- Ability to share libraries within workgroups for increased efficiency
- Promote use of code
- Exclude unnecessary modules for smaller and faster executables
- Module names, public names, and external names up to 255 characters long
- Ability to create DOS libraries in the background under OS/2.

True Multi-tasking under DOS!



Bring the advantages of true multitasking to your MS-DOS application! Time-Slicer is a library of linkable "C" functions that allow you to create multitasking

and real-time programs at the application level, rather than interfacing with an operating system. Key features include:

- No predefined limit to the number of tasks
- Fast context switching designed for real-time systems
- Intertask communication
- Critical resource management
- Default round-robin scheduling, with complete programmer control over preemption.

"I wish I could see the source code!"



ADVANTAGE Disassembler is an indispensable tool for those programmers who have said this all too often. ADVANTAGE Disassembler

allows you to disassemble MS-DOS executable files and produce comprehensive assembly language source code. Key features include:

- Memory resident disassembler
- Create source files from executables
- Disassembles both .EXE and .COM files
- Math co-processor support.

PLink86+	SRP: \$395
Polylibrarian	SRP: \$249
TimeSlicer	SRP: \$295
ADVANTAGE	
Disassembler	SRP: \$295

LIFEBOAT[®]
SOFTWARE

1163 Shrewsbury Avenue
Shrewsbury, NJ 07702
(800) 447-1955 • (908) 389-0037

To order, call (800) 447-1955

NEW PRODUCTS

from LIFEBOAT® Software



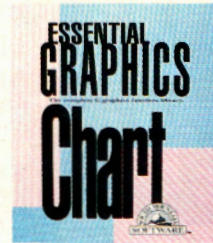
Essential Graphics Chart™ for Windows

The advent of graphical programming and GUIs means the days of bland statistics and tables are a thing of the past. Essential Graphics Chart for Windows lets you turn your data into charts and graphs that make an immediate visual impact. From South Mountain Software.

Features include:

- DLL - works with any Windows API compatible language
- 2D bar, stacked bar, pie, line, scatter, hi-low-close, pyramid and area charts
- 3D bar, stacked bar, pie, pyramid and area charts
- Legends for all chart types
- Real-time charts with scrolling horizontal axis and data values
- True perspective and rotational capability
- Hardcopy to any bitmap capable printer supported by Windows
- No royalties

SRP: CALL



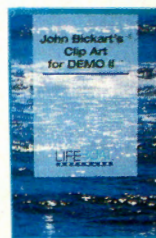
John Bickart's® Clip Art for Demo II™

Add excitement to your Demo II presentation. John Bickart's Clip Art for Demo II adds sights, sounds, and color to bring a professional look to your Demo II prototype, demonstration, or tutorial.

Features include:

- Graphics Library of 300 bitmapped images ready to use with Demo II - mixed VGA, EGA, CGA, and mono
- Sounds Library - sound effects, melodies, a piano player, and a note range - add your own music!
- Library of large text letters for use in titles and illustrations
- Colors Library - Color schemes, sample menu screens in different colors and styles, and a series of text windows designed for displaying text on a screen

SRP: \$79



**Call today, and
add sizzle to
your Demo II
project.**

John Bickart's® CBT Tool Kit for Demo II™

Build effective tutorials - rapidly! Demo II is the perfect tool for CBT - it has the features of dedicated authoring software at a fraction of the price. Major corporations - such as Novell and Ford - rely on Demo II to build tutorials that work. John Bickart's CBT Tool Kit lets you rapidly build sophisticated CBT tutorials by providing you with pre-built Demo II templates and examples that you can cut and paste into your own lessons.



Highlights include:

- Complete working CBT models
- Student responses to a question
- Feedback on student progress
- Gaming as an instructional tool - complete example game included
- Expert reviews for wrong answers
- Tracking a student's progress
- Smart glossaries
- Electronic bookmarks

...and much more!

PLUS, when you purchase John Bickart's CBT Tool Kit for Demo II, John Bickart's Clip Art for Demo II is included at no additional cost. **CALL TODAY!**

SRP: \$169

LIFEBOAT®
SOFTWARE

1163 Shrewsbury Avenue
Shrewsbury, NJ 07702
(800) 447-1955 • (908) 389-0037

To order, call (800) 447-1955

Return Policies*

The Programmer's Paradise® return policy allows customers to open and review software documentation for a period of 30 days. Customers are permitted to return products within this 30-day time period provided the disk seals are not broken and the product is in resaleable condition.

All returns are subject to a \$20.00 handling fee and a 10% restocking fee per product. Please submit your request for a return authorization number. You will be mailed a Return Request Form that must be filled out and signed before the return authorization number is issued. This form will be mailed back to you. It must accompany the product being returned. (If the Return Request Form is not included in the return, credit can not be issued for the return. If products are not returned in saleable condition, they will be sent back to the purchaser.) In cases where the publisher's return policy differs from ours, we will generally honor the publisher's policy but Programmer's Paradise return fees will apply over and above the publisher's policy. In this section, each product listed has been given a code that reflects the return policy of the publisher. These codes are located at the bottom of each description. The explanation of the codes are as follows:

- F Full 30-day guarantee.** Product must be in saleable condition. Disk seals may be broken. If the documentation is not in saleable condition an additional 10% fee will be applied.
- L Limited 30-day guarantee.** DO NOT BREAK THE DISK SEAL. Product must be in saleable condition. If product does not have the disk seals customer must obtain prior approval from the publisher before product can be returned.
- N Not returnable unless granted prior approval from the publisher.** Customer must obtain return authorization number from the publisher before product will be accepted for return.
- O Other.** This code will be followed by a short statement specifying the nature of the return policy.

If no return code is listed by the product, you must have written confirmation from Programmer's Paradise on return requirements.

*Return policy subject to change without further notice.

DOS DEVELOPMENT SOFTWARE

386/486 TOOLS

ASSEMBLY

386 iDOS-Extender™ Software Development Kit 4.1 Phar Lap Software

The 386 iDOS-Extender Software Development Kit enables software developers to build 32-bit protected mode applications which break the 640K DOS barrier and access all the memory available in the machine—up to 4 gigabytes. Includes 386 iASM, an 80x86 assembler, 386 iLINK linker, the 386 iLIB librarian, a development version of 386 iDOS-Extender protected mode run-time environment, and 386 iDEBUG, a debugger for both real mode and 386 iDOS-Extender programs. Supports VCPI, XMS, DPMI, and all modes of Windows 3.0. 386 iDOS-Extender, which can be bound within the application, is invisible to the end-user.

List: \$495 Ours: \$435
FAXcetera #: 1490-0006 Return: F

C

C-scape 386 with Look and Feel 3.2 Liant Software

The C-scape Interface Management System that supports DOS extenders. It includes all the functionality of C-scape DOS (data entry and validation, windows, menus, text editing, context sensitive help, mouse and graphics support) and the Look & Feel Screen Designer and Code Generator. The Look & Feel Screen Designer is a free-form screen editor for designing and creating screens for C programs. It produces C source code for use with C-scape and can stand alone to simulate screen appearance and operation for prototyping purposes. Programs written with C-scape 386 can exceed the DOS 640K memory limitation, and are portable between DOS, OS/2, UNIX, VMS, and the X Window System. Supports Borland Turbo C, MetaWare High C 386, Microsoft C and Watcom C 386. Supports Ergo Computing OS/286 and OS/386 DOS Extender, Phar Lap 286 & 386 DOS Extender SDK and Rational Systems DOS 16/M DOS Extender.

List: \$999 Ours: \$899
FAXcetera #: 1952-0009 Return: F

High C/C++ for Extended-DOS 80386-486 3.0

MetaWare Incorporated

The High C/C++ compiler offers many advanced features not found in any other C++ compiler. The "incremental Strengths" feature lets the developer specify the level of C++ compilation, allowing migration from C to C++ one C++ block at a time. C++ templates have been fully implemented in this globally-optimizing compiler. MetaWare also holds the distinction of being the only 32-bit C/C++ compiler with floating-point

support for a full range of numeric coprocessors, including the Weitek ABACUS 1167, 3167, and 4167, as well as the Intel 80387, and 387 compatibles. Includes High C/C++ compiler, 32-Bit Source-Level Debugger, and MetaWare's 32-Bit Windows Application Development Kit.

List: \$795 Ours: \$669
FAXcetera #: 1590-0008 Return: L

WATCOM C9.0/386 WATCOM Group

Develop and debug 32-bit applications for extended DOS and Windows with the most complete 32-bit C development package available. C8.5/386 is packed full of tools you need to unleash 32-bit power on your applications at a low package price. You get the royalty-free DOS/4GW DOS extender by Rational Systems, components from Microsoft Windows SDK, award-winning compiler, protected-mode linker, interactive debugger, execution profiler, run-time compatibility with WATCOM FORTRAN 77/386 V8.5 (see separate description) plus numerous development tools. C8.5/386 also supports other industry standard 32-bit DOS extenders.

List: \$895 Ours: \$599
FAXcetera #: 1683-0001 Return: F

WindowsMAKER Professional for 32-bit code: WATCOM C8.5/386 and C9.0/386

Blue Sky Software Corporation

Object-oriented prototyping and development tool enabling users to design, test, and generate 32-bit graphical Windows applications by simply pointing and clicking. From tool palette select and place on-screen menus, icons, printers, scroll bars, dialog boxes, radio buttons, child and sibling windows, keyboard and mouse-controllable windows, and other graphical objects that comprise a Windows application interface. Generates the Windows .EXE w/exact, expert level, fully commented 32-Bit C source code and production files (CUA & SAA compliant). Test, preview and interactively make changes to the application before the source code is compiled. Custom code is preserved during code regeneration. (No royalties or runtime fees).

List: \$995 Ours: \$895
FAXcetera #: 2602-0006 Return: F

C Communications Toolkit/ Extended DOS

Magna Carta Software

All the features of C Communications Toolkit with additional support for DOS Protected mode communications. Supports the following compiler/extender combinations: Borland C++ 2.0,3.0 w/ Phar Lap 286 iDOS-Extender; Intel C Code Builder 386/486 w/Intel 386 extender; Metaware High C 386/486 w/Phar Lap 386 iDOS-Extender; Microsoft C 6.0a w/ Phar Lap 286/DOS-Extender; Watcom C 386 w/Rational Systems; Phar Lap 386 iDOS-Extender, Intel DOS Extender. Also supports all real mode compilers supported in C Communications Toolkit. Full source code. Full 30-day guarantee.

List: \$300 Ours: \$270
FAXcetera #: 1967-0004 Return: F

For 24 hour instant
product information
try FAXcetera®
See page 176 for
instructions
on how to use the
numbers listed below
each product.

FORTRAN

FTN77/386 2.60

EuroSoft, Inc.

FTN77 provides 4GB flat address space. It compiles and executes extremely fast (100,00 lines of FORTRAN in 5 min on a 386/33). Conforms to the ANSI FORTRAN77 standard and offers additional extensions (VAX). FTN77 includes a built-in profiler, and easy to use full screen debugger, a make utility and an extensive library with over 230 routines for windowing, mouse, graphics, etc. Windows 3.x fully supported.

List: \$1350 Ours: \$1215
FAXcetera #: 2304-0001 Return: F

FTN77/486 2.60

EuroSoft, Inc.

32-bit-Fortran compiler with the same features as 77/386; in addition, it exploits the special architecture of the 80486 chip doubling compilation and execution speed as compared to FTN/386 on the same system.

List: \$1745 Ours: \$1571
FAXcetera #: 2304-0002 Return: L

FTN77/ix

EuroSoft, Inc.

FTN77/ix is a 32-bit high performance FORTRAN77 compiler. It compiles and executes very fast. Runtime has globally optimizing or full checking options and profiler. Supplied with FORTRAN friendly command driven debugger and extensions to interface to C. NIST validated for ANSI conformance.

1-2 users:
List: \$1350 Ours: \$1215
unlimited users:
List: \$1695 Ours: \$1525
FAXcetera #: 2304-0003 Return: L

Lahey F77L-EM/32 4.0

Lahey Computer Systems

Industry leading 32-bit FORTRAN Language System includes Phar Lap's 386/DOS-Extender. This VCPI, XMS, and DPMI compliant extender enables users to access up to 4GB and operate in the MS Windows DOS box. The extender is royalty-free and includes virtual memory and support. New with Version 5.0: 32-bit debugger, arrays beyond 16MB, compression linker, and 486 optimizations. Support for popular VAX, IBM VS, and 90 features.

List: \$1390 Ours: \$1015
FAXcetera #: 1476-0004 Return: F

WATCOM FORTRAN 77/386 V9.0 for Extended DOS and Windows WATCOM

WATCOM FORTRAN 77/386 is ideal for porting applications from the mainframe to extended DOS and Windows. F77/386 conforms to the full ANSI FORTRAN 77 language, IBM's SAA FORTRAN language definition and support, VAX and Microsoft extensions. F77/386 is packed full of tools you need to unleash 32-bit power on your applications at a low package price. You get the royalty-free DOS/4GW DOS extender by Rational Systems, components from Microsoft Windows SDK, high-performance compiler, protected-mode linker, interactive debugger, execution profiler, run-time compatibility with WATCOM C8.5/386 (see separate description) plus numerous development tools. F77/386 also supports other industry standard 32-bit DOS extenders. You can also use F77/386 Professional to create ADS applications for AutoCAD or for embedded systems development.

List: \$895 Ours: \$719
FAXcetera #: 1683-0005 Return: F

PASCAL

Professional Pascal for Extended-DOS 80386-486 2.8

MetaWare Incorporated

MetaWare's Professional Pascal is designed for professional software developers. The compiler generates superior code and provides accurate error messages and excellent diagnostics. The compiler can be modified to suit specific needs by using a wide variety of toggles and pragmas. Professional Pascal supports a full range of numeric coprocessors including the Weitek ABACUS 1167, 3167, and 4167 chips, Intel 80x87, Cyrix FastMath, and Integrated Information Technology's 3C87.

List: \$795 Ours: \$716
FAXcetera #: 1590-0009 Return: L

Professional Pascal for DOS 80x486 2.8

MetaWare Incorporated

MetaWare's Professional Pascal is designed for professional software developers. The compiler generates superior code and provides accurate error messages and excellent diagnostics. The compiler can be modified to suit specific needs by using a wide variety of toggles and pragmas. Professional Pascal supports a full range of numeric coprocessors including the WEITEK ABACUS 1137, 3167, and 4167 chips, Intel 80x87, Cyrix FastMath, and Integrated Information Technology's 3C87.

List: \$495 Ours: \$446
FAXcetera #: 1590-0009 Return: L

Sheffield Pascal/386

EuroSoft, Inc.

32-bit extended memory high-performance ISO Pascal (plus extensions) compiler. Very fast compile-time speed. Excellent diagnostics at both compile and runtime. Bundled with free DOS extender, virtual memory manager, disk cache, linker, co-processor emulation and full screen debugger. Extensive run-time graphics library. Fully compatible with FTN77/x86 for mixed language programming.

List: CALL Ours: CALL
FAXcetera #: 2304-0004 Return: L

ADA LANGUAGE

Ada Graphics 4.3

AETECH, Inc.

AdaGraphics is an advanced graphics library for AETECH IntegrAda Ada compilers. Generates "C-like" graphics in Ada. Includes a broad spectrum of highly-optimized graphics tools for all PC-graphics modes. Composed of easy-to-use object-oriented Ada packages with data structures and program units for both low-level pixel functions as well as high-level presentation graphics. Read/Write PCX, Tiff & Dr. Halo Images. Animate bit-block graphic images.

List: \$695 Ours: \$626
FAXcetera #: 2358-0001 Return: N

IntegrAda 4.3

AETECH, Inc.

IntegrAda is a complete Ada Programming Support Environment for MS-DOS & POSIX. Quickly access language sensitive editor, powerful libraries, automatic code generation & error checking tools, validated compiler, pop-up training and referencing tools, design & documentation tools, and many other Ada specific tools with a simple hot-key or mouse click. Chosen by the US Air Force as the standard Ada products for the DESKTOP III contract.

List: \$395 Ours: \$356
FAXcetera #: 2358-0001 Return: N

ASSEMBLY LANGUAGE

ASSEMBLERS

Microsoft Macro Assembler 6.0

Microsoft Corporation

MASM 6.0 reduces coding time and simplifies code maintenance by including intuitive, high-level language constructs and language extensions. MASM 6.0's Microsoft Programmer's Workbench includes an editor, an assembler, a source-browsing facility, a project management utility, and on-line references. Whether or not you are writing programs completely in assembly language, MASM 6.0 is the ultimate environment for assembly-language development.

List: \$150 Ours: \$99
FAXcetera #: 1269-0010 Return: L

Turbo Debugger & Tools 2.0

Borland International

Borland has redefined optimization with Turbo Debugger & Tools 2.0 which includes Turbo Debugger 2.0, Turbo Profiler 1.0, and Turbo Assembler 2.0. Turbo Debugger now offers reverse execution to undo statements and instructions. Debug any size program with 286, 386 and remote debugging. Turbo Profiler measures your program and graphically shows you: where time is spent; how many times a line is executed; how many times a routine is called and by what routines; what files are accessed most often and for how long; and when and where the interrupts are called. Turbo Assembler 2.0 is 3 times faster than, and fully compatible with, MASM 4.0, 5.0, and 5.1. This multi-pass assembler generates optimized code with NOP squishing for 8086, 80286, 80386, and

80486. Requires 284K memory (356K for assembler).

List: \$150 Ours: \$113
FAXcetera #: 1861-0002 Return: O
Full 60 day guarantee.

DISASSEMBLERS

ADVANTAGE Disassembler

Lifeboat Software

A fast memory-resident program which gives programmers the ability to disassemble executable files (.EXE and .COM files) to produce comprehensive, well-documented assembly language source code. The programmer can add additional comments, make changes to code, define labels for subroutines, data areas or I/O port addresses, check conflicts in memory, or add more code before reassembling. Supports Intel math coprocessors, includes two tutorials providing example disassembly of .EXE and .COM files.

List: \$295 Ours: \$279
FAXcetera #: 0233-0001 Return: L

Sourcer 4.0

V Communications, Inc.

A commenting disassembler which automatically converts COM, EXE, device drivers, overlays, Windows VxDs, or RAM or ROM into clear commented assembly code. Built in code and data analyzers with code simulation produces incredible results. Disassembles 8088/86 through 80486, real and protected code. Includes automatic indexed call/jump analysis; descriptive labeling for BIOS & PSP areas; large file support; and more!

List: \$130 Ours: \$117
FAXcetera #: 1828-0001 Return: O
Full 30 Day Guarantee-Not Returnable
Unless Granted Prior Approval



COMDEX SPECIAL
\$599



Taking You Beyond the Limits

IntegrAda is a complete Ada Programming Support Environment for MS-DOS and POSIX. Not just a validated compiler, but a complete programming system, including powerful libraries. Chosen by the U.S. Air Force as the standard Ada products for Desktop III.

Generate "C-Like" graphics in Ada using AdaGraphics. Simply "with" the library and you can animate your scanned images, easily create unique bar or line charts, and much, much more!

Quickly access a wide selection of automatic code generation and error checking tools, "pop-up" training & referencing tools, design and documentation tools and many other Ada specific tools with a simple "hot-key" or mouse click.

Reviewers Comments

◆ "IntegrAda has the most versatile and complete APSE available for the PC."
Government Computer News

◆ "Welcome 'Turbo' Ada programming for the PC's." Al Today

◆ "IntegrAda's interface is the most dynamic-turbo-like and screen oriented..."
Government Computer News



5841 Edison Place, Suite 110
Carlsbad, California 92008
(619) 431-7714
FAX: (619) 431-0860



DOS & Windows Disassembly!

Sourcer™ generates commented assembly language source code and listings from executable files or memory.

Sourcer gives you the power to easily change and modify existing programs for which the source code is unavailable or lost. It also helps you learn and understand assembly code.

Unlike other disassemblers that produce "debug" style output, Sourcer performs an extensive analysis to generate clear assembly source code in the style similar to the original. Sourcer generates the best results of any 8088 - 80486 disassembler, automatically. Compare the output yourself and see the dramatic difference Sourcer makes.

"Sourcer is the best disassembler we've ever seen."

PC MAGAZINE

"V Communication's Sourcer is by far the best MS-DOS PC disassembler I have seen; it bundles more features and options than any other similar product."

IEEE Software

"All in all, Sourcer does the best analysis of any of the disassemblers I tested and gets extra points for handling BIOSes and packed files (albeit at an extra charge)."

Programmer's Journal

DisDoc is a trademark of RJSwanteK, Inc.

Partial Disassembly of a Virus

mov	ax,2517h		
mov	dx,offset int_17h_entry		
int	21h		DOS Services ah=function 25h
			set intpt vector al to ds:dx
			(Halt when ? printed.)
mov	dx,offset data_4		
mov	ah,9		
int	21h		DOS Services ah=function 09h
			display char string at ds:dx
mov	dx,10h		
mov	ah,31h		
int	21h		DOS Services ah=function 31h
			terminate and stay resident
			al=return code, dx=paragraphs
virustst	endp		
External Entry Point			
int_17h_entry	proc	far	
	pushf		Push flags
	cmp	al,3Fh	?



V Communications, Inc.

4320 Stevens Creek Blvd, Suite 275
San Jose, CA, 95129 FAX 408-296-4441
800-648-8266 or 408-296-4224

Partial List of Sourcer's Advantages

	Sourcer™4.5	DisDoc™4.0
Depth of Analysis		
Simulates code	yes	no
Auto segment sizing	yes	no
Supports MASM, TASM & Optasm	yes	partial
Emulated floating point interrupts	yes	no
Descriptive BIOS & PSP data labels	yes	yes
Descriptive Interrupt entry points	yes	no
Offset analysis	yes	partial
Interrupts		
Average comment size	65	28
Supports undocumented interrupts	yes	no
Describes all registers used for DOS interrupts	yes	no
Usage summary report	yes	no
Menu driven	yes	yes
Large file size support	yes	yes
Max. custom comment size (each)	64,000	32
Assembly ASM & listings output	yes	no
In-line cross reference	yes	no
Price	\$129.95	\$249.95
Optional Windows & OS/2 support	yes	partial
VxDs (Virtual Device Drivers)	yes	no
Inserts Windows API calls, by name	yes	no
Uses CodeView symbols	yes	no
Utilities for resources, header examination & export extraction	yes	no
Optional BIOS listing generator with extensive comments	yes	no
Optional Unpacker with utilities	yes	no

New! Windows Source™

Creates assembly listings for Windows EXEs, DLLs, VxDs & OS/2 files. Labels, by name, all exports and imported function calls, including all Windows API calls. Inserts CodeView symbols and much more! Only \$129.95. Requires Sourcer. Save \$30, order the complete package including Sourcer for only \$229.90.

COM 80486 Device Drivers 80386 EXE 80286 Windows VxDs 80186 Binary Files 80x87 BIOS 8088 TSRs

Sourcer w/BIOS Pre-Processor 4.0

V Communications, Inc.
All the features of Sourcer with the ability to generate detailed source listings for all BIOS ROMs in a system. It identifies entry points with detailed in-line comments, explains functions and sub-functions, register usage, and other key information. Provides highly descriptive labels such as "video_mode" and "int_9_keyboard". Fully automatic operation.
List: \$170 Ours: \$129
FAXcetera #: 1828-0002 Return: F,N

Unpacker 1.4

V Communications, Inc.
Unpacker assists with the debugging and disassembly analysis of software. It converts packed programs into runnable unpacked programs. It also allows the separation of attached overlay programs. Multi-segment COM programs can be converted back into real EXE type programs. Includes other utilities to simplify the viewing of interrupt vectors and for testing video operations.
List: \$40 Ours: \$36
FAXcetera #: 1828-0003 Return: F

LIBRARIES/UTILITIES

ASM Checker 1.05

V Communications, Inc.
A set of tools to automatically locate potential problems in assembler source code. Similar to LINT for C programmers, ASM Checker locates and explains potential logic errors in assembly source code. It also cross-references and type-checks external and public symbols across multiple source files. Works with all major assemblers including Microsoft's MASM and Borland's TASM, in both normal and ideal modes.
List: \$180 Ours: \$162
FAXcetera #: 1828-0006 Return: F

Spontaneous Assembly 2.1

Base Two Development
Spontaneous Assembly 2.1 is the complete assembly language library that makes real assembly language programming as easy as a high-level language. It contains over 800 ready-to-use, fully optimized language routines including: powerful TSR and device driver support; multi-tasking; state-of-the-art data compression; full-featured windowing; high-speed console I/O with 28/43/50-line and multiple/virtual screen support; formatted/scripted I/O; enhanced data conversion; advanced near/far/local heap management; 32/64-bit integer math; program and environment control; full memory model support; full access to your C compiler's floating point emulator; a 750+ page manual; and much more...all royalty free.
List: \$199 Ours: \$159
FAXcetera #: 2614-0001 Return: F

BAR CODING

Bar Code Library 2.3

The StrandWare
A programmer's library, written in "C", that generates and prints bar codes from within your own program. Print over one dozen bar codes. Supports several languages such as Clipper, "C", QuickSilver, and QuickBASIC and other languages that can interface to C subroutines. Supports most printers. "Reader's Choice Award", Data Based Advisor, December 1990. Source included.
List: \$389 Ours: \$319
FAXcetera #: 2831-0002 Return: L

For return policy details see page 75.

Your Bar Code Library Is Overdue.

Check out Bar Code Library. A programmer's library from StrandWare that lets you print bar codes from within your own programs in minutes. It's fast. Easy to use. Works on most printers and operating systems. Saves you time since you don't have to write and maintain your own subroutines. And saves you money because you'll never pay royalties for library usage. With a price of only \$389 with source, the time is right to check out Bar Code Library! To order or for more information, call 1-800-552-2331 or Fax 1-715-833-1995.

THE COMPUTER CONNECTION

StrandWare™

For Anyone Who's Keeping Track.

© 1991 StrandWare, Inc.

BASIC

COMPILERS

GFA-BASIC for DOS

GFA Software Technologies, Inc. GFA-BASIC lets you bring a graphical user interface to your DOS applications. Includes 500 systems commands and functions, and several hundred commands and functions for developing GUI. You won't need any additional tools for a "Window's feel" when you create DOS versions with GFA-BASIC. List: \$235 Ours: \$212 FAXcetera #: 3614-0001 Return: L

Microsoft BASIC Professional Development System 7.1

Microsoft Corporation All you need to create high performance BASIC applications. Now supports expanded memory specification (EMS) 4.0 and run-time overlays for creating large scale programs and smaller, faster executables. Includes ISAM database functions, Excel-style spreadsheet features, and routines for presentation graphics, matrix math, and user interfaces. Support for math coprocessor and emulation. Comes with Microsoft QuickBASIC. List: \$495 Ours: \$349 FAXcetera #: 1269-0023 Return: L

Microsoft Visual Basic for MS-DOS

Microsoft Corporation Visual Basic for MS-DOS, standard edition, gives you the benefits of advanced programming without the time investment of learning it. You can create exciting visual interfaces without leaving MS-DOS. Work with controls that have

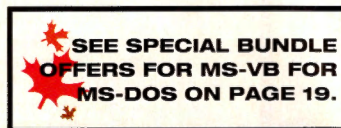
built-in processing power—scroll bars that already know how to scroll and push-buttons that already know how to push. It's a part-time programmer's dream come true!

List: \$199 Ours: \$137
Comp. upgrade List: \$99 Ours: \$95
FAXcetera #: 1269-0039 Return: L

Microsoft Visual Basic for MS-DOS Professional Edition

Microsoft Corporation Create full-featured applications for MS-DOS visually with Microsoft Visual Basic for MS-DOS Professional Edition. You now have the freedom to develop for either MS-DOS or Windows with access to databases as large as 128 MB. It has all the productivity of MS VB for MS-DOS Standard Edition, plus an optimizing compiler for today's advanced processors. Now you can develop a powerful multiple-platform solution in record time!

List: \$495 Ours: \$337
Comp. upgrade List: \$199 Ours: \$189
FAXcetera #: 1269-0039 Return: L



Microsoft QuickBASIC 4.5

Microsoft Corporation The fastest, easiest way to program in a modern, structured way. Line numbers and GOTO's are out, having been replaced by all the power of a modern, structured language. Powerful features include DO/WHILE, CASE, recursion, SUBprograms (with local variables), user-defined datatypes (records), and the raw speed of a professional compiler and

linker. MS QuickBASIC will still run virtually all old GW-BASIC/BASIC programs at blinding speed. Program lines are compiled at over 15,000 lines per second. Learning MS QuickBASIC is easy with MS QuickBASIC Advisor, an on-line hypertext help system that gives detailed information instantly.

List: \$99 Ours: \$69
FAXcetera #: 1269-0024 Return: L

DATABASE

DATABasic 1.01

Blue Rose Software, Inc. Designed by and for BASIC users. B-trees. Hash key indexing with average 1.6 I/O seek time. Multiple keys per file. Multiple fields per key. No packing. Automatic index updates. 4 gigabyte files. Top rated manual. Design tool. Works with QB, VB and PDS. Fast and compact, DATABasic is the definitive tool for the serious BASIC programmer.

List: \$249 Ours: \$224
FAXcetera #: 1002-8701 Return: L

db/LIB Professional Database Library 2.0

AJS Publishing A linkable library of assembly routines enabling MS BASIC PDS to perform genuine database management using industry database (DBF) and index (NDX) files. Index routines provide fast keyed-file access in any specified order. db/LIB's built-in expression evaluator validates input, processes record selection queries, and dynamically formats data for output. Includes 12 file management programs that perform the ordinary tasks of database management.

List: \$189 Ours: \$170
FAXcetera #: 2113-0004 Return: L

GRAPHICS

GraphPak Professional 3.1

Crescent Software Includes scientific graphs, scatter plots, financial graphs, and the ability to display multiple fonts simultaneously. Also needed are text-based bar charts which can be displayed very quickly and routines for loading and saving PCX graphics files. Dump graphics from any screen to HP Laserjet or Epson printer. All BASIC and assembler source code is provided. Specify compiler. Requires 256K memory.

List: \$149 Ours: \$135
FAXcetera #: 1572-0010 Return: L

LaserPak 2.0

Crescent Software A complete set of BASIC subroutines for controlling an HP Laserjet or compatible laser printer. Modelled after the BASIC graphics commands, LaserPak allows BASIC programs to quickly and easily draw lines, boxes, circles, symbols and fill patterns. Other capabilities include graph scales and grids, text labeling and complete control over all of the Laserjet control sequences. LaserPak also includes a sophisticated symbol editor that can be used to design and manage logos, symbols, clip-art, and custom fonts. A complete demonstration program is provided that shows all of the LaserPak features in context. All BASIC and assembler source code is included. Specify compiler: Microsoft QuickBASIC 2.0, 3.0, 4.0, 4.5 or Borland Turbo BASIC 1.1 or later. Requires 256K memory.

List: \$149 Ours: \$139
FAXcetera #: 1572-0011 Return: L

Boost your Basic with ProBas™ 5.5!

New ProBas 5.5 boosts your BASIC programs into orbit!

- > Over 900 routines, most in assembly for speed & size!
- > Arrays, Comm, DOS, Equipment, Files, Input, Memory, Sorts, Strings, Virtual windows, GUI, and many more!
- > Fast, flexible code, hundreds of examples!
- > 1200+ pages of docs!
- > Write fast and professional programs in less time!
- > **Unconditional** 60 day Money Back Guarantee!

Formerly Hammerly ProBas.

FREE
demo disk &
booklet.

CALL NOW! 800-447-9120 ext. 153



Other C, BASIC and Visual Basic tools...

- **ZBF** - symbol table compactor, compiles large programs
- **ToolKit** - menus, dialog, BTree, EXE patch...
- **ProMath** - 150 math/stat/physics/graph functions
- **HyperHelp** - hypertext toolkit & help system
- **ProRef** - on-line ProBas manual
- **ProFont** - Screen font library - rotate, color, size fonts
- **TeleComm** - telecomm & terminal emulations
- **Financial Library** - interest/bond/cashflow calculations

TeraTech, Inc.
Tools for Programmers

3 Choke Cherry Road, Suite 360, Department 153
Rockville, MD 20850
Int'l: +1 (301) 330-6764 • FAX: (301) 963-0436
BBS: (301) 963-7478

DOS DEVELOPMENT SOFTWARE

ProFont TeraTech

Over 24 graphic screen fonts in 6 scalable typefaces. Display text in any graphic mode screen including 800x600 super VGA. Fonts can be rotated, scaled and precisely positioned at the pixel level. No royalties. Requires QuickBASIC, PDS BASIC 7 or VB or DOS.

List: \$125 Ours: \$113
FAXcetera #: 1972-0010 Return: F

LIBRARIES

P.D.Q. 3.0 Crescent Software

Create BASIC programs that are smaller and faster than ever dreamed possible. Imagine a DOS "filter" program taking 1400 bytes of memory or a TSR printer set-up utility in only 3K. TSR and interrupt handling are built directly into the P.D.Q. library. P.D.Q. is a complete replacement for the BCOM libraries included with QuickBASIC, BASIC 6.0 and 7.0, and is perfect for writing small applications and TSR utilities, where program size and execution speed is critical. Alternate libraries are provided for creating 80286- and 80386-specific applications. All source code is included. Requires 256K memory and Microsoft QuickBASIC 4.0 or later.

List: \$149 Ours: \$134
FAXcetera #: 1572-0004 Return: L

PDQCOMM 2.5 Crescent Software

Adds serial communications to BASIC programs. Supports Com ports 1-4, and hardware and software handshaking. Uses syntax nearly identical to BASIC for fast integration and minimal learning curve. Features XMODEM and ASCII File Transfers, many terminal emulations. Requires Microsoft BASIC 4.0 or later.

List: \$99 Ours: \$89
FAXcetera #: 1572-0009 Return: L

ProBas 5.5 TeraTech

ProBas has 938 routines to make your programs faster and more professional. Includes routines for: virtual screens, a complete GUI, file compression, extended/EMS support, improved file I/O, mouse, windowing, sorts, string and numeric, hundreds more...1200 pages of docs. No royalties. Requires QuickBASIC, BASIC PDS 7, or VB for DOS. Hard disk required. 3-5 MBS space.

List: \$195 Ours: \$169
FAXcetera #: 1972-0004 Return: F

ProBas HyperHelp Toolkit 1.0 TeraTech

Hypertext engine allows you to put full manuals on line with full search abilities. Specify single or multiple windows, and window color and placement. User can move and resize window, use mouse or keyboard, and use up to 40 bookmarks to move between links. Hypertext can be created from any ASCII text. Requires ProBas library. No royalties. Requires QuickBASIC, BASIC PDS 7, or VB for DOS. Hard disk requires 1MBS space.

List: \$125 Ours: \$113
FAXcetera #: 1972-0001 Return: F

ProBas Toolkit 2.11 TeraTech

High level routines for menus, windowing system with four-way scrolling and other features, word-wrap input, BCD math, .EXE pathing, character definition, fast B-tree indexing and more. Extensive docs and BASIC source code included. Requires ProBas library. No royalties. Requires QuickBASIC, BASIC PDS 7, or VB for DOS.

List: \$125 Ours: \$113
FAXcetera #: 1972-0002 Return: F

ProMath Math Library 1.0 TeraTech

A collection of 150 mathematical functions and routines. Included are trigonometric, hyperbolic, Airy, factorial, gamma, error, beta, Fresnel, and Bessel functions. Also, included are statistics, matrix operation, functions, FFTs, roots of equations, graphics and more. No royalties. Requires Quick BASIC, BASIC PDS 7, or VB for DOS. Hard disk required. 1 MB space.

List: \$125 Ours: \$113
FAXcetera #: 1972-0003 Return: F

Telecomm Toolkit 1.11 TeraTech

Routines for XMODEM, MODEM7, Batch YMODEM, and YMODEM batch file transfer; VT52, VT100 and ANSI-BBS terminal emulation; baud rates up to 15200 bps; command processor; script language; dialing directory; autodialing; and pop-up menus and status windows. Full commented BASIC source code included. Requires ProBas library. No royalties. Requires QuickBASIC or BASIC PDS 7 or VB for DOS. Hard disk required.

List: \$75 Ours: \$68
FAXcetera #: 1972-0007 Return: F

QuickComm 2.0 Software Interphase, Inc.

A communications library that supports up to 16 serial ports simultaneously, including: COM1-COM4 generic boards; Digital Board PC/x series; or your own configuration. Also supports boards containing 16550 chip. QuickComm is totally interrupt-driven and written in assembly. It supports: XMODEM; XMODEM-CRC; YMODEM and YMODEM-Batch file transfer protocols; XON/XOFF and CTS/RTS flow control; powerful string input/output/filtering; event trapping for characters received and RS-232 signal changes (using BASIC's ON EVENT); complete with Hayes-modem routines; and more. QuickComm comes with a well-documented manual and several example programs including a multiport, window based, mouse driven terminal program. No TSR is required when QuickComm is linked with your programs. Supports Microsoft BASIC 7.x and QuickBASIC compilers, and Turbo C/C++ and Microsoft C/QuickC. Must specify C or BASIC version. Software Interphase will send the QuickComm source code to you upon receipt of the registration card. Full 30 day guarantee. Not available to customers in Austria, Germany or Switzerland.

List: \$149 Ours: \$135
w/source:
List: \$249 Ours: \$199
FAXcetera #: 1767-0001 Return: L

QuickPak Professional 4.0 Crescent Software

The most comprehensive set of extensions and tools for use with compiled BASIC. Includes a complete collection of financial and mathematical functions, video services that automatically accommodate any of the text screen modes and display sizes, assembler calls to search and sort arrays, and insert or delete elements. Also included are assembler routines for fast string manipulation, DOS services that eliminate the need for ON ERROR, pop-up calculator, calendar, ASCII chart, editor and spreadsheet, plus many menuing routines. BASIC and assembler source code included. Specify compiler: Microsoft QuickBASIC 2.0, 3.0 or 4.0. Requires 256K memory.

List: \$199 Ours: \$159
FAXcetera #: 1572-0001 Return: L

QuickPak Scientific 3.0 Crescent Software

QuickPak Scientific adds sophisticated numerical methods to your programs, including routines for solving linear algebra, differential equations, curve fitting, complex numbers, statistics, vectors, matrices, integration and differentiation, fast Fourier transforms, non-linear equations and more.

List: \$149 Ours: \$135
FAXcetera #: 1572-0012 Return: L

SCREENS/WINDOWS

Designer QuickWindows 1.5 Software Interphase, Inc.

Designer QuickWindows is a companion "CAD" program for QuickWindows Advanced. Hit CTRL-D from inside the QuickBASIC environment to run Designer. Use the mouse or keyboard to lay out the windows, dialog boxes, and data-entry screens. When you are finished, Designer will write BASIC source code for that screen and merge it into your program.

List: \$69 Ours: \$62
FAXcetera #: 1767-0002 Return: F

ProScreen Screen Management 1.0 TeraTech

Screen painter for 80x25 or 809x43 screens, good color control, edit three screens at a time, up to 130 fields per screen, 19 predefined and user-defined masks. No royalties. Requires Quick BASIC or BASIC PDS 7. Hard disk required. 1 MB space.

List: \$99 Ours: \$89
FAXcetera #: 1972-0008 Return: F

QuickMenu 3.2 Crescent Software

A full-featured DOS menu system. Define the menu titles, the list of DOS commands to be executed for each, and these will be executed automatically. Unlike other DOS menu programs, QuickMenu does NOT remain memory resident while executing a program. QuickMenu features: up to 9 commands per menu; unlimited menus; full screen command editor; and context sensitive help. File import and export capability lets you bring in existing batch files or create new ones. QuickMenu provides full control of colors on CGA/EGA/VGA text screens with user defined color schemes and background patterns for each menu. QuickBASIC 4.0 source code included. Requires 256K memory. 3 1/2" diskettes are available.

List: \$59 Ours: \$53
FAXcetera #: 1572-0002 Return: L

Quick Screen 4.0 Crescent Software

The most sophisticated screen management software ever developed. With its powerful screen painter, designing screens is a snap. Draw text and backgrounds, define data entry fields, and manage screen libraries that contain dozens of screens in a single file. A unique feature lets you optionally write screens to an object file, which is linked with your program and called by name. Additional features include routines for field by field editing with full data validation, on-line help, 17 field types, and automatic field calculations. Simply enter the formulas using ordinary BASIC equations, and Quick Screen does the rest. All BASIC source code included. Requires Microsoft QuickBASIC 4.0 or later. Requires 256K memory (512K recommended).

List: \$149 Ours: \$135
FAXcetera #: 1572-0003 Return: L

QuickWindows Advanced Software Interphase, Inc.

QuickWindows Advanced provides you with a complete set of user interface routines that work in 26 text and graphics modes through Super VGA. With QuickWindows Advanced, you create windows (exploding and shadowed), multi-tasking pop-up and pulldown menus, contact-sensitive help windows, pick lists, message boxes, data entry forms with picture fields and dialog boxes. All interface elements are keyboard and/or mouse driven. QuickWindows Advanced contains a full-featured icon and font editor. QuickWindows comes with many example programs. No TSRs are required to use Quick Windows. The QuickWindows Advanced Corporate Platform includes QuickWindows Advanced with assembly language source code, Designer QuickWindows, FREE automatic updates and telephone technical support for one year.

List: \$149 Ours: \$134
w/assembler source code
List: \$349 Ours: \$314
corporate
List: \$399 Ours: \$339
FAXcetera #: 1767-0003 Return: F



For 24 hour instant product information try FAXcetera®
See page 176 for instructions on how to use the numbers listed below each product.



ADDITIONAL PRODUCTS

Don Malin's Cross Reference Program (XREF) 2.20

Crescent Software, Inc.
A sophisticated cross-reference utility for fully documenting an entire application. It lists all variables, arrays, constants, and procedures alphabetically by type and scope, even across separate modules. A unique call-tree report identifies your procedures showing who called what, which routines are present but never accessed, and more. XREF also contains the string to code (STR2CODE) utility which relocates literal strings out of BASIC's DGroup.
List: \$59 Ours: \$55
FAXcetera #: 1572-0008 Return: L

ProRef 5.0

TeraTech
ProRef product provides on line help from QB/QBX for all 938 routines in ProBas. Cut and paste program examples into your program! No royalties. Requires QuickBASIC or BASIC PDS 7. Hard disk required. 1MBS space.
List: \$50 Ours: \$45
FAXcetera #: 1972-0006 Return: F

ProRef for ToolKit 2.0

TeraTech
Provides on-line help from QB/QBX for all routines in ProBas ToolKit. Cut and paste examples into your program! No royalties. Requires QuickBASIC or BASIC PDS 7.
List: \$50 Ours: \$45
FAXcetera #: 1972-0006 Return: F

QB Plus 1.0

Crescent Software
Unique add-in expands capabilities of QB and QBX environment. Allows any compile and link options to be specified. Features superb memory viewer, execution profiling (timing), keyboard macros. Shell from QB to other programs with full DOS memory available. Requires MS BASIC version 4.5 or later.
List: \$59 Ours: \$53
FAXcetera #: 1572-0015 Return: L

QuickHelp 1.21

Crescent Software
A complete help message system that lets you add instant pop-up help to any application. Features include indexed file access for fast retrieval, user-definable hot key and customized colors. It accommodates the 25, 43 or 50 line display modes automatically. Includes compiler for creating unlimited help screens. QuickHelp requires only 22K of DOS memory — less than 1/3 needed for most other on-line help packages.
List: \$59 Ours: \$53
FAXcetera #: 1576-0006 Return: L

Visual Librarian 1.0

Software Interphase Inc.
A flow-chart based, point-and-click approach to managing from simple to complex Quick and Link Libraries for Microsoft QB or PDS. Allows you to create or modify libraries by including object modules, link libraries, function names, and by scanning BASIC source code. It will also resolve external references and search all link libraries for specific procedures. Other features include: context sensitive help system throughout, formatted reports for Libraries, with publics and externals listed, interactive Whereis Utility, mouse support, object module extraction. Includes manual and 5 lesson tutorial section. Supports Microsoft QuickBASIC 4.x and Basic PDS 7.x. 3.5" diskettes are available to registered users.
List: \$99 Ours: \$89
FAXcetera #: 1767-0005 Return: F

C LANGUAGE

COMPILERS

Instant-C 5.0

Rational Systems
The Instant-C professional programming environment integrates the edit-compile-link-test cycle in one powerful, high performance programming tool. It offers C programmers significant productivity gains by combining an incremental compiler and linker with automatic static and runtime error detection e.g. use of uninitialized pointers, source level debugging, interactive C expression evaluation including macros, cross referencing and browsing, single function or partial program execution and support of programs up to 16MB. Instant-C is compatible with Microsoft C source and libraries, allowing programmers to develop using Instant-C and then produce production code using Microsoft C. Instant-C is compatible with commercial object code libraries in medium or large model.
List: \$495 Ours: \$440
FAXcetera #: 1067-0001 Return: F

Microsoft QuickC 2.5

Microsoft Corporation
An integrated development environment for C that includes a seamlessly integrated editor, incremental compiler, incremental linker, NMAKE program maintenance utility and sophisticated source-level debugger. It is designed for programmers who want to learn C, yet demand a powerful development system. Its focus is on ease of mastery. QuickC 2.5 makes the learning curve as short as possible with its QC Advisor, an on-line, hypertext-based reference system on the environment and the language, extensive program examples, and C For Yourself, an easy-to-read book that guides the new C programmer from the foundations of the language to the advanced unique features of QuickC. On-line context sensitive hypertext-based help, easy menus and computer based training make it easy to learn and use.
List: \$99 Ours: \$69
FAXcetera #: 1269-0008 Return: L

Microsoft QuickC Compiler with QuickAssembler 2.5

Microsoft Corporation
QuickAssembler provides a powerful extension to QuickC, providing a fully-integrated MASM development system into the QuickC integrated environment. The QuickAssembler Programmer's Guide provides the instruction you need to have you integrating Assembler into your C code faster than ever before. This is the first integrated environment for Assembly language! Integrated assembly routines greatly enhance the speed of your code.
List: \$199 Ours: \$139
FAXcetera #: 1269-0009 Return: L

WATCOM C9.0 for DOS, Windows and OS/2

WATCOM
WATCOM C9.0 generates 16-bit applications to run in today's leading PC operating environments. Widely-acclaimed for outstanding code generation, C9.0 generates fast, tight and reliable code. The powerful interactive debugger supports DOS, Windows and OS/2 applications using single monitor, dual monitor and remote debugging capabilities. 100% ANSI C and IBM SAA conformance simplify porting issues. Other significant features include:

protected-mode compiler and linker, object module convert utility to industry standard debugger formats, dynamic overlay manager, execution profiler, graphics library plus numerous development tools. Runtime compatible with WATCOM FORTRAN 77 V9.0 (see separate description).
List: \$495 Ours: \$435
FAXcetera #: 1683-0003 Return: O
60 day guarantee

INTERPRETERS

C-terp (MS-DOS) 3.5

Gimpel Software
C-terp is not just a C interpreter but a powerful professional debugging and development environment. It features full K&R support with ANSI extensions, a full screen, built in, reconfigurable editor, incredibly fast semi-compilation, complete multiple module support, automatic make file, global search, 8087 support, preprocess facility, system shell, trace, batch mode and complete full-screen source level interactive debug facilities. To create a truly customized development environment, link in your assembler routines, libraries compiled with the large memory model of your Microsoft compiler under MS-DOS, and anything else compatible with your compiler. Use our batch file to link in your compiler and external libraries. For very large applications use our software paging, shared symbols option and direct access to extended or expanded memory.
For Microsoft C List: \$299 Ours: \$239
C-terp 386 List: \$398 Ours: \$319 (specify High C or WATCOM 386)
FAXcetera #: 1247-0003 Return: F

CAD/CAM

CAD/CAM Developer's Kit/2D 2.0

Building Block Software
The CAD/CAM Developer's Kit/2D is a collection of C functions which perform 2D CAD/CAM operations. These operations include: point and curve construction and editing, point and curve display in viewports (adaptable to any graphics library or environment), and DXF input and output. The types of geometry supported by the 'CAD/CAM Developer's Kit/2D are: point/vector, line, arc/circle, ellipse, non-uniform rational B-spline (NURB), and polycurve (end-to-end sequence of lines and arcs). Supports lists which simplify programs which process batches of geometry. CAD/CAM Developer's Kit/2D is a subset of the "CAD/CAM Developer's Kit/3D".
List: \$ 499 Ours: \$449
w/source List: \$ 998 Ours: \$898
Professional List: \$ 999 Ours: \$899
w/source List: \$1998 Ours: \$1799
FAXcetera #: 2809-0002 Return: O
Source code version not returnable.



**We ship
Worldwide!**

Develop CAD/CAM, GIS, A/E/C Products ON TIME AND UNDER BUDGET

with Building Block Software's

CAD/CAM Developer's Kit (CCDK) Series

2-D • 3-D • DXF • NC-Milling • NC-Turning

What are the CAD/CAM Developer's Kits?

The CCDKs are libraries of C functions which support standard CAD/CAM features such as reading and writing DXF files, constructing, editing and graphically displaying 2D and 3D CAD geometry, and computing numerical control toolpaths.

What can the CCDKs be used for?

For many types of programs and software products that need vector based graphics... CAD/CAM... mapping... GIS... A/E/C... motion control... desktop publishing... robotics ...

The only limit is your imagination!

What are CCDK users saying?

"We saved at least six months of development"
Gaetano Tavano, President, STLD Italy

"Using CCDK we went from specification to working program in just two days"
John Pentecost, Software Engineer, Bay State Technologies

"The CAD/CAM Developer's Kit saved me 500+ hours"
Randall Maynes, Robotics Consultant

What platforms are CCDKs used on?

Many including DOS, Macintosh, UNIX, CADKEY CDE, AutoCAD ADS, Windows 3.x and Windows NT.

What do the CCDKs cost?

Kit prices through Programmer's Paradise start at \$ 449.
Source code, maintenance and site licenses are available.



**Building
Block
Software**

371 Moody Street, Waltham, MA 02154 • (617) 899-4350 • Fax (617) 899-4399
For Technical Information, use FAX cetera (908) 389-8173 # 2809-0002

CAD/CAM Developer's Kit/3D 2.0 Building Block Software

The CAD/CAM Developer's Kit/3D is a collection of C functions which perform CAD/CAM operations. These operations include: 2D and 3D point and curve construction and editing, point and curve display in viewports (adaptable to any graphics library or environment), and DXF input and output (full AutoCAD Release 11 support). The types of geometry supported by the CAD/CAM Developer's Kit/3D are: point/vector, line, arc/circle, ellipse, non-uniform rational B-spline (NURBS), and polycurve (end-to-end sequence of lines and arcs). All types of geometry are supported in both 2D and 3D. In addition, CAD/CAM Developer's Kit/3D supports lists which simplify programs which process batches of geometry. All of the functions in the CAD/CAM Developer's Kit/2D and the CAD/CAM Developer's Kit/DXF are included in this product.

List: \$999 Ours: \$899
w/source List: \$1998 Ours: \$1799
Professional List: \$1798 Ours: \$1618
w/source List: \$3598 Ours: \$3238
FAXcetera #: 2809-0004 Return: O
Source code version not returnable.

CAD/CAM Developer's Kit/DXF Personal 2.0 Building Block Software

A collection of C functions which read and write DXF files. It supports all AutoCAD Release 10 entity types, including: LINE, ARC, CIRCLE, POLYLINE (curves); TEXT and DIM; INSERT; ATTDEF and ATTRIB (insert attributes). All information is in 3D format. Also provides access to all: Header variable, table entries, and blocks. Block inserts may be exploded to any nesting depth. For applications that must process large files, the CAD/CAM Developer's Kit/DXF supports one-at-a-time or partial reading and writing. Using these features, an ordinary executable running in 640K / DOS can access all information in any DXF file, even if its 5MB in size!

List: \$599 Ours: \$525
w/source List: \$1198 Ours: \$1078
Professional List: \$1199 Ours: \$1079
w/source List: \$2498 Ours: \$2249
FAXcetera #: 2809-0003 Return: O
Source code version not returnable.

TG-2D 4.0

Disk Software, Inc.

A 2D CAD/CAM/CAE Developers kit. Over 300 2D geometric and graphic routines for CAD/CAM/CAE and Graphics applications. Includes curves (NURBS, Bezier, B-Spline, Catmull-Rom, Quadratic, Conic routines). Intersection, unions and differences of polygons. Composite 2D transformations (Rotate, Scale, Shear, Translate, Mirror). Surface area calculations. Vector computations and error handling and many more. DXF input and output. Graphic support for MSC and BGI graphics. Includes TG-Utilities v.1.0, manuals, example programs and source.

List: \$300 Ours: \$270
FAXcetera #: 1768-0002 Return: F

TG-3D 4.0

Disk Software, Inc.

A 3D CAD/CAM/CAE Developers kit. Over 300 3D geometric and graphic routines for CAD/CAM/CAE and Graphics applications. Includes curves (NURBS, Bezier, B-Spline, Catmull-Rom). Surface normals and tangents. Hidden line removal. 3D volume and polygon

clipping. 3D Composite transformations (Rotation, Scale, Translate, Mirror and Inverses) and more. DXF input/output. MSC and BGI graphics support but not required to use geometric routines. TG-Utilities 1.0, example programs and source included.

List: \$300 Ours: \$270
FAXcetera #: 1768-0003 Return: F

TG-Professional 4.0

Disk Software, Inc.

A 2D/3D CAD/CAM/CAE Developers kit. TG-Professional is a combination of TG-2D, TG-3D and TG-Utilities. Over 700 geometric and graphic routines which support device independent geometry and CGA/EGA/VGA graphics devices. Draw 2D objects such as chords arcs, circles, ellipses, parabolas, hyperbolas, curves and more. Draw 3D objects such as lines, spheres, cylinders, pyramids, prisms, parallelepipeds, ellipsoids, 3D curves and surfaces. Supports MSC and BGI graphics drivers. Manual, example programs and source included.

List: \$500 Ours: \$450
FAXcetera #: 1768-0005 Return: F

TG-Utilities 1.0

Disk Software, Inc.

TG-Utilities library has general utility routines that perform link list management, GUI, graphics, general purpose math, and list processing routines. Create pulldown menus, pop-up dialog boxes, message windows, and more. DXF input and output to release 10. Read and write AutoCAD DXF file entities: header variables, table entries, block definitions and the entry types: LAYER, STYLE, VIEW, LINE, ARC, POLYLINE, FACE3D, TEXT, ATTRIB and DIM. Manual, example programs, and source included.

List: \$200 Ours: \$180
FAXcetera #: 1768-0004 Return: F

CODE GENERATORS

dANALYST Gold 6.0

Buzzwords International Inc.

A complete multi-user development environment for the C programmer. Standard features include complete source code generation for Microsoft Windows SDK including relational DBMS interaction with full SQL client-server capabilities. The Applications Designer is used to create source screens that make calls to Video Libs and DBMS calls to create complete applications, not just video I/O. Directly supports Intel 386/486 C Code Builder. Includes the SoftC DBMS Lib for C access to dBASE files and Buzzwords Pro Video Library. Supports FairCom C-Tree, Novell Btrieve and XQL Manager, Raima db_Vista and other Engines. Executes source code analysis and reformatting to user defined standards. Produces Files Tree chart to represent flow of your application. Creates modular and global cross references of #define locations, variables, and functions. Supports Header file processing and preprocessing. Menu designer creates standard, bar, pulldown, push-button, and push-button-pulldown menus. Includes 350 Windows icons, Paint Shop for Windows screen capture and file type conversion, and Listicon for displaying Windows icons from DOS.

SPECIAL OFFER!

List: \$495 Ours: \$79
FAXcetera #: 1873-0001 Return: N

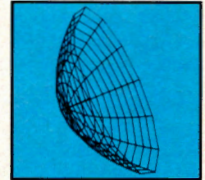
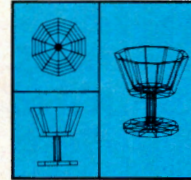
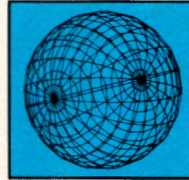
FOR RETURN POLICY
DETAILS
TURN TO PAGE 75.

CAD/CAM/CAE DEVELOPMENT KIT for C AND C++

TG-PROFESSIONAL v.4.0

The Ultimate CAD/CAM/CAE Programming Engine

Build the CAD/CAM/CAE application you want, the way you want, using the over 800 2D and 3D geometric and graphics routines for CAD/CAM/CAE and graphics applications. These include DXF, NURBS, Surfacing, Hide Line, Perspective, Rotation, Scaling, Clipping, Polygon (Int/Union/Diff) and many, many more. Includes MSC and BGI graphics support and full source. You need not look further, TG-Professional v.4.0 has the geometric routines you need.



Invest in TG-Professional v.4.0, "The Ultimate CAD/CAM/CAE Programming Engine" today and slash your development time. Save both man-hours and money. TG-Professional v.4.0 consists of TG-2D, TG-3D and TG-Utilities Development Kits. For more information about our products see our listing in this catalog. Compatible with MSC, Borland C/C++ and the 32-bit power of WATCOM C/386 and MetaWare C/C++. We have the right programming tools for you.

Professional Tools For Professional Developers by Disk Software Inc.

To order: Call 1-800-445-7899 or
FAX 908-389-9227

Disk Software Inc. 2116 E. Arapaho Road, Suite 487, Richardson, TX
USA 75081. 214-423-7288

"I'm tremendously impressed by Layout, by its ease of use, by its capabilities, by its price. Put down this magazine and order Layout now. It's that good!"

That's what PC-AI Magazine said about Layout, the only tool that lets you build DOS programs by manipulating

objects on screen -- without writing code. Not just simple programs, but complete, heavy-duty GUI applications. And when you're done, Layout creates stand-alone .EXE, C/C++ (MS & Borland!), Pascal, or QuickBasic code. Layout has over 110,000 users, more than 30 add-ons (including support for simultaneously building DOS and Windows programs), and is only \$299.95.

Call 800-424-6644 for more information.

Objects, Inc.

Objects, Inc.
99 Rosewood Drive
Danvers, MA 01923
508-777-2800
FAX 508-777-0180

Layout 2.13 Objects, Inc.

Layout is a tool that allows you to build programs without writing code. You build programs by arranging objects in a flowchart. Layout has objects that handle user-interfaces (windows, menus, graphics and buttons), mathematical functions, program control and working with hypertext databases. Your flowchart will be transformed into C, PASCAL, QuickBasic, or a ready to run .EXE. Layout is designed for IBM PCs or compatibles with 640 RAM, a hard disk, three megabytes of hard disk space, DOS Version 3.0 or above, and a supported graphics card: CGA, EGA, VGA, HGA, Toshiba 3100, AT&T 6300, MCGA. A mouse is supported, but not required. Layout supports Turbo Pascal (5.5), Microsoft C (5.0 thru 6.0), Lattice C (6.0), QuickBASIC (4.5) and TURBO C (2.0). Layout comes with all of the language engines built in. Layout-created programs can work on any standard IBM PC equipped with a graphics card and as little as 256K memory and a floppy disk. List: \$300 Ours: \$270 FAXcetera #: 2919-0001 Return: O Free and unlimited returns of damaged goods.

PRO-C with Workbench 2.01 PRO-C Limited

PRO-C is a C Source Code Application Generator. It produces standalone database applications for PARADOX, CODEBASE 4, C-ISAM, BTRIEVE, ORACLE and other database engines. PRO-C generates screens, reports, menus and batch processing programs to run on UNIX, QNX and DOS systems. **SPECIAL OFFER!** List: \$795 Ours: \$99 FAXcetera #: 1983-0001 Return: F

COMMUNICATION LIBRARIES/UTILITIES

BreakOut-II 3.20

South Mountain Software, Inc.
BreakOut-II turns your PC into a full function RS-232 serial analyzer. The software allows you to capture or send data (Hex or ASCII) on COM1 or COM2, while you control and monitor line signals at baud rates up to 115K. Includes AutoBaud detection, NS16550 support, many display methods (ASCII, Hex, EBCDIC,...), instant help, line test, continuous data generation and macros. Test on any COM port or tap in between an existing communications circuit. Data can be stored and loaded to or from a file, checksum evaluated (XOR, summation, and CRC16), re-transmitted, and examined or modified with an easy to use screen editor. Also included is the ability to do protocol analysis on captured data (CALC and CRC-16) in any format desired. You can even write your own protocol. Includes cable and toolkit. List: \$249 Ours: \$225 FAXcetera #: 2089-0005 Return: F

C Asynch Manager 3.1 Blaise Computing Inc.

C Asynch Manager is a comprehensive set of routines that allows you to build asynchronous communications capabilities into C programs. You can set port options, capture data reliably, command modems, transfer files, and detect and recover from exceptional conditions. Protocols include X, Y, ZMODEM, and XON/XOFF. Supports Hayes compatible modems and the 16500 UART. Supports Microsoft C/C++, and Turbo and Borland C++. List: \$219 Ours: \$175 FAXcetera #: 1652-0005 Return: F

C Communications Toolkit Magna Carta Software, Inc.

U(S)ART support: 8250/16450/16550A, Z-80 SIO, any port address and IRQ. Speed to 115,200bps. Protocols: ASCII, XMODEM/CRC/1k, Kermit, YMODEM, YMODEM-g, ZMODEM. Emulations: ANSI/3.64, VT52/100, IBM ANSI.SYS.. Flow Control: RTS/CTS, DTR/DSR, XON-XOFF. Full modem support. Fully interrupt-driven. Buffers up to 64K. FAX support: All CAS compatible FAX cards. Extensive manual. List: \$150 Ours: \$135 FAXcetera #: 1967-002 Return: F

Essential Communications 4.0

South Mountain Software, Inc.
Essential Communications is a powerful asynchronous communications library stressing reliability and ease of use. Supports interrupt driven communications on both the receive and transmit sides at speeds up to 115,200 baud. Includes support for up to 34 ports with buffers to 500K. It also provides support for V.32, MNP and Hayes compatible modems as well as XON/XOFF, XMODEM (CRC and Checksum), XMODEM 1K, YMODEM, KERMIT and ZMODEM protocols. Also provides ANSI and VT 52/100 terminal emulations. When used with our /*resident_C*/ software you have the ability to write background communication applications. Contains all source code, a comprehensive manual, a BBS demo and an ANSI compatible terminal emulator demo. No royalties. List: \$329 Ours: \$296 FAXcetera #: 2089-0006 Return: F

Greenleaf CommLib™ 3.20 Greenleaf Software, Inc.

The premier communications library loaded for true interrupt driven async communications. Features X and YMODEM FAMILY, ZMODEM, KERMIT, RTS/CTS and XON/XOFF protocols. Supports up to 35 serial ports with non-intelligent or intelligent multiport boards, 115K, 286 DOS extenders (Rational/PharLap), network modem access (Sparkle/Modem Assist), and INT 14 BIOS/EBIOS. Includes PDQPlus Online Help Engine and help file. Full source. No royalties. Supports MS C, Zortech, WATCOM, Turbo C, Turbo C++, Borland C++ and TopSpeed. List: \$359 Ours: \$305 FAXcetera #: 1035-0007 Return: L

Greenleaf ViewComm™ 3.0 Greenleaf Software, Inc.

A full-featured software serial data analyzer. See what's happening on the RS-232 serial port in great detail. Monitor mode examines data flow between a pair of communicating devices, capturing data, status and modem signals (graphical display) plus timestamps to a buffer, disk file or both and displays it live! Source Mode lets you interface-send data to either device from the keyboard or file while observing responses. Triggers can be set (wildcards allowed), push to DOS and displays of hardware/software flow control. View data up to 115,200 baud in ASCII, EBCDIC, HEX, OCTAL, DECIMAL, BAUDOT and binary. List: \$399 Ours: \$305 FAXcetera #: 1035-0006 Return: F



**Keep
our
number at your fingertips!**

QuickComm 2.0 Software Interphase, Inc.

A communications library that supports up to 16 serial ports simultaneously, including: COM1-COM4 generic boards; Digital Board PC/x series; or your own configuration. It supports: XMODEM; XMODEM-CRC; YMODEM and YMODEM-Batch file transfer protocols; XON/XOFF and CTS/RTS flow control; powerful string input/output/filtering; event trapping for characters received and RS-232 signal changes (using BASIC's ON UEVENT); complete with Hayes-modem routines; and more. QuickComm comes with a well-documented manual and several example programs including a multiport, window based, mouse driven terminal program. No TSR is required when QuickComm is linked with your programs. Supports Microsoft BASIC 7.x and QuickBASIC compilers, and Turbo C/C++ and Microsoft C/QuickC. Must specify C or BASIC version. Software Interphase will send the QuickComm source code to you upon receipt of the registration card. Full 30 day guarantee. Not available to customers in Austria, Germany or Switzerland. 1.5 lbs. List: \$149 Ours: \$135 w/source: List: \$249 Ours: \$225 FAXcetera #: 1767-0001 Return: F

SilverComm "C" Async Library 3.1 SilverWare, Inc.

Interrupt driven asynchronous communication library. Baud rates up to 115K, unlimited number of ports, Device Event monitors, Background timers, Huge Model Queues, Direct Video Functions, Table Driven Design and Terminal Emulation. List: \$249 Ours: \$199 FAXcetera #: 1678-0003 Return: O Unconditional Money-Back Guarantee

View232 1.1 Blaise Computing Inc.

View 232 instantly turns your PC into a full function communications dataline monitor allowing data to be displayed in six different-formats, and the system configuration to be completely controlled and saved. Supports all languages. List: \$219 Ours: \$175 FAXcetera #: 1652-0009 Return: F

FILE MANAGEMENT

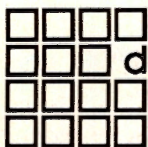
Btrieve 5.10 for DOS, OS/2, or Windows (Developer's Kits) Novell, Inc.

Btrieve Developer's Kits are complete toolkits that allow developers to write applications with Btrieve, Novell's key-indexed record manager. Developers can write applications for either the client-server or client-only versions of NetWare Btrieve™ without changing data management code. Supported languages include BASIC, C, Pascal, FORTRAN, Modula-2, COBOL, and Assembler. Also included are development utilities for creating and manipulating Btrieve files. The kit is available for DOS, OS/2, and Windows environments. Third-party development tools for Btrieve applications are now available allowing more flexibility in writing applications for the different client platforms. List: \$595 Ours: \$399 FAXcetera #: 1728-0001 Return: L

C DATA MANAGER™

- Create Object-Oriented Database from your C or C++ programs
- Object classes and relationships defined at run-time
- Supports persistent objects, inheritance and many-to-many relationships
- Entity-Relationship data model combined with B-tree ISAM
- Runs on DOS, Windows, Mac, Sun, UNIX, written in ANSI C, easy to port
- Server/Client architecture for multi-user version
- Prices start at \$295

CALL 617/332-5619 FOR DEMO DISK



**database
technologies**

Box 67148
Brookline, Ma 02167

C-Data Manager™ 3.8 Database Technologies

Create object-oriented database from your C/C++ program. Object classes and relationships defined at run-time. Supports persistent objects, inheritance and many-to-many relationships. Network model combined with BTree ISAM. Runs on DOS, MAC, OS/2, Windows 3.0+, 386 UNIX, NEXT. Written in ANSI C, EASY TO PORT. Server-Client architecture.
List: \$295 Ours: \$266
FAXcetera #: 2210-0001 Return: F

c-tree Plus™ File Handler 6.0 FairCom Corporation

Fast and highly portable B+ Tree functions provide multi-key ISAM file management. There are low level functions to create or maintain individual data and index files, and high level functions for indexed or sequential data access. c-tree Plus supports record and key level locking; fixed and variable length records; duplicate and unique key fields; dynamic file space reclamation; resource records; superfiles; batched operations and in conjunction with the FairCom Servers, full transaction processing and ANSI standard SQL.
List: \$595 Ours: \$476
FAXcetera #: 1381-0004 Return: L

Code Base 4.5 Sequit Software Inc.

A Database and Screen Management C library for programmers who need speed, portability, productivity and dBASE/Clipper file compatibility. Use the multi-user Database management routines to access dBASE data files five times faster than dBASE IV and process data one hundred times faster. Maintain several index files per database, set relations and filters, and access dBASE III or dBASE IV memo files. Use the Screen Management routines to build pulldown menus, pop-up windows and data entry from pick lists. Develop under DOS, OS/2 or MS Windows. Source code included. Supports Borland Turbo C, Turbo C++, Microsoft C/QuickC, WATCOM C 386 and Zortech C++. Supports MS-DOS or OS/2. Hard disk recommended.
List: \$395 Ours: \$295
FAXcetera #: 1935-0001 Return: F

Code Base 4.5 Portability Release Sequit Software Inc.

A superset of Code Base 4.5, that provides complete database management capabilities to C programmers. It contains porting information, and two sets of C source code. There is one set of source code for ANSI C and C++ compilers and another set for K&R C compilers.
List: \$495 Ours: \$449
FAXcetera #: 1935-0001 Return: F

Essential B-Tree 2.0

South Mountain Software, Inc.

Provides a complete set of small, fast, powerful and extremely easy to use functions for database manipulation. It is written entirely in C and can be compiled with just about any C compiler. Support for single or multiple keys, fixed or variable length records, automatic file and record locking, floating point keys, re-use of deleted records, and more. Includes the option to combine the data and index files or keep them in separate files. Utilities are provided to convert to/from dBASE III data bases. The library comes with all source code, a comprehensive manual providing detailed examples and demo programs. No royalties.
List: \$199 Ours: \$179
FAXcetera #: 2089-0001 Return: F

r-Tree® Report Generator 1.3 FairCom Corporation

This professional report generation utility, in full C source code, permits complex relational reports to be produced from c-tree data files. r-tree joins records from multiple data files; computes complex virtual fields; selects logical records which satisfy an arbitrarily complex select expression; monitors any number of nested control break fields; computes any number of report field accumulators; and handles page layout with page headers and footers, control break headers and footers and pagination.
List: \$295 Ours: \$236
FAXcetera #: 1381-0003 Return: F

The FairCom® Server 1.0 FairCom Corporation

Affordable, ultra high performance, multi-threaded, transaction processing server designed with developers in mind. Use the Server independently or link it directly into your application. Features include industrial quality transaction processing, including full commit and rollback, intermediate save points and complete logging; fully automatic log management, restart and disaster recovery; dynamic on-line data dump and backup; user passwords, access security and on-line administration; deadlock detection and resolution; and read or write locks at the record and individual key level. c-tree Plus™ provides the full client side interface and development kit for this unique server.
List: \$49-\$995 Ours: CALL
FAXcetera #: 1381-0001 Return: L

The FairCom SQL Server 1.0 FairCom Corporation

A complete ANSI X3.135 1986 level 2 SQL engine coupled with all the functionality and features found in the standard FairCom Server including industrial strength transaction processing, high performance multi-thread design, and the unique ability to link the SQL Server directly into your application. Virtually the complete SQL system functionality is available through both the interpreter and the programmatic interface. c-tree Plus™ provides the full client side interface and development kit for this unique SQL Server.
List: \$79-\$1495 Ours: CALL
FAXcetera #: 1381-0002 Return: L

FirstSQL C 2.1

FFE Software, Inc.

An embedded precompiler for PCs which promotes direct access to database and dBASE files from C programs. From within C, users can manipulate a database and dBASE files with SQL statements. Full-fledged database applications can be created using the FirstSQL pre-compiler and other compiler and development tools. High level SQL commands for database access are placed directly in the program source. Acts as a fully relational DBMS. Oracle and DB2 compatible. Dynamic Embedded SQL-full precompiler facility to build and execute SQL commands at runtime. FirstSQL CAPI-call level interface to the SQL engine-pass SQL commands as Strings to the DBMS. DLL for MS/Windows-the SQL engine in DLL form for running embedded SQL programs and programs using the First SQL C call level interface under Windows.
with Windows and dynamic SQL:
List: \$395 Ours: \$349
without Windows:
List: \$295 Ours: \$266
FAXcetera #: 1001-1701 Return: L

SoftC Database Library 3.0 SoftC, Ltd.

C library with over 200 functions providing fast access to xBASE files. Library features include: standalone, multi-user and network access; index expression evaluation; automatic record and file locking; built-in disk caching; and find using full or partial keys. Routines are supplied to access the following file types: DBF, DBT, FPT, IDX, MDX, NDX & NTX. Includes complete fully-commented, ANSI & K&R C compliant source code, a Windows DLL, and libs for DOS. UNIX & OS/2 support included in source.
List: \$195 Ours: \$176
FAXcetera #: 1004-9801 Return: F

The Toolbox 2.0

FairCom Corporation

Industrial strength tools to develop applications with both the development ease and speed of a 4GL and the execution speed and efficiency of C. The Toolbox with its development environment by d-tree™, data management by c-tree Plus® and report generation by r-tree® puts performance, productivity, and profitability into one integrated package. Features include prototype generation, data dictionary, dynamic resource swapping, screen management, overlapped windows, file restructuring, runtime portability, menu management, variable length record support, index key compression, dynamic file space reclamation, variable length key fields, high speed B+ trees, complex multi-line reports, multi-file report access, and complete report layout control.
Special List: \$795 Ours: \$569
Professional List: \$1295 Ours: \$1065
FAXcetera #: 1381-0005 Return: F

XQL 2.11

Novell, Inc.

The developer's toolkit for NetWare SQL, Novell's high-performance relational database engine. It permits developers to write SQL applications in C, BASIC, COBOL, and PASCAL, and includes an embedded SQL preprocessor for C. Like all of Novell's database products, XQL utilizes Btrieve for fast and reliable record management so applications created with XQL can share data with Btrieve, NetWare SQL, and Xtrieve PLUS.
List: \$795 Ours: \$636
FAXcetera #: 1728-0003 Return: L

Xtrieve PLUS™ v4.1

Novell, Inc.

Novell's menu-driven relational data access system with a flexible report writer. Xtrieve PLUS™ allows users to define and modify databases created with Btrieve, and with NetWare SQL, Novell's relational database engine. Xtrieve PLUS can access popular front-end applications that are compatible with Btrieve and NetWare SQL including PC accounting packages, spreadsheets, and project management systems. It can be used to create custom displays and reports without programming, or to write Command File macros that can be executed instantly. Features include data editing and sorting capabilities, mouse support, expanded printer support, enhanced configuration and data storage options and security control. Xtrieve Plus is available for the DOS and OS/2 environments, and can be configured to operate with NetWare Btrieve™, the DOS or OS/2 client-only version of Btrieve, or with any version of NetWare SQL.
List: \$995 Ours: \$796
FAXcetera #: 1728-0004 Return: L

SoftC Database Library

SoftC is the database library of choice for professional C & C++ developers. It offers unsurpassed speed, flexibility and portability along with access to industry standard files at a very competitive price.

- Full compatibility with dBASE, Clipper, Alpha IV, FoxBASE+ & FoxPro.
- Portable to DOS, OS/2, UNIX, & XENIX.
- Included Windows DLL is linkable with most DLL-capable compilers (including Visual Basic).
- Single/multi-user & network access supported.
- 100% C source code (both ANSI & K&R).
- No Royalties. Version 3.2 now shipping.

Complete Package
for only:

\$195

30 day money back
guarantee.



16820 Third Street Northeast
Anoka, MN 55304-4703 U.S.A.
Fax (612) 434-5023

New!
FoxPro 2
CDX File
Support!
(612) 434-6968

DOS DEVELOPMENT SOFTWARE

GENERAL LIBRARIES

C TOOLS PLUS 6.0

Blaise Computing Inc.

C TOOLS PLUS is designed especially for Microsoft C and provides capabilities to create applications including virtual stackable menus and windows with optional borders and drop shadows and full mouse support integrated within the windowing and menu systems. Routines for building ISRs and TSRs are also provided. Supports Microsoft C 5.0 and later (including MSC 7.0) and QuickC and requires DOS 2.1 or later.

List: \$169 Ours: \$135
FAXcetera #: 1652-0001 Return: F

C Utility Library 5.0

South Mountain Software, Inc.

The C Utility Library is a comprehensive, easy-to-use library of over 400 C language functions for both the experienced and novice C programmer. Includes pulldown and pop-up menus, windowing, list and file boxes; all complete with shadows. Other features include: EMS 4.0 support, the quickest video output available, a window editor/file browser, and file back-up utilities. With C Utility Library's menuing system, screen painter and code generator, you can easily build user interfaces and data entry forms with complete mouse support and keyboard exits. No royalties. All source included.

List: \$249 Ours: \$224
FAXcetera #: 2089-0011 Return: F

Dolphin C Toolkit 1.40

Dolphin Software

Over 225 functions, emphasizing date, time, string, disk, file, directory and printer functions. Date functions convert between calendar dates and long ints and perform date arithmetic. Timer functions. Disk functions detect presence, type and number of disks and disk drives. Complete DOS print spooler interface. Many diverse string and file functions. Supports Borland/Turbo C/C++ and Microsoft C.

List: \$149 Ours: \$134
FAXcetera #: 3019-0001 Return: L

Greenleaf Financial MathLib™ 1.11

Greenleaf Software, Inc.

This product brings the power of decimal accurate Math to the C language. Exact representation of numbers up to 18 digits, freedom from rounding or truncation (unless you request it), plus complete business and financial applications functions. Financing functions include compound and simple interest, internal rate of return, cash flow analysis, bond calculations, amortization, depreciation, statistics and much more. Online help system and source code included. No royalties.

List: \$395 Ours: \$335
FAXcetera #: 1035-0004 Return: L

Greenleaf Functions™ 4.02

Greenleaf Software, Inc.

A library of over 420 functions that cover many useful tasks that your compiler ignores such as DOS and BIOS interface, string functions, interrupt services, disk access and keyboard functions. Graphics video effects and sound are also contained, along with directory operations, file searchers, and two sets of disk file operations. Professional documentation includes examples of each function that helps get you up and running and keeps you there. Full source included; no royalties.

List: \$229 Ours: \$195
FAXcetera #: 1035-0009 Return: L

Greenleaf SuperFunctions™ 1.10

Greenleaf Software, Inc.

An advanced set of functions for the professional C programmer who wants to utilize the technology of today's hardware & software. Features include: expanded memory support, extended mouse functions, advanced time manipulations, unique data functions, DOS critical error handler, windows, menus, and keyboard functions. Source included, no royalties.

List: \$299 Ours: \$255
FAXcetera #: 1035-0008 Return: L

Hold Everything 1.05

South Mountain Software, Inc.

Allows programmers to swap out currently executing programs and return to DOS with almost all available memory ready to be used. Provides a safe, reliable method of saving active memory to disk or EMS in one function. This allows you to run another program and return back to the calling program, right where it left off. Combined with our /*resident_C*/ software you have the ability to use this power in a TSR program as well. All source code included. No royalties.

List: \$199 Ours: \$179
FAXcetera #: 2089-0003 Return: F

/*resident_C*/ 4.5

South Mountain Software, Inc.

A C library which enables you to make your C code memory resident. It has the ability to keep only 4K of your TSR in memory, storing the rest in XMS, EMS or disk memory. With one function call you can turn your C program into a TSR which can be activated by keystroke or hooked into the PC's timer to allow for background processing (see Essential Communications). Also supports interrupt handlers (ISR's) and shared resident libraries. Includes a super keyboard stuffer, text/graphics screen saver and the ability to communicate between TSRs and/or foreground programs. Combined with our Hold Everything product, you have the power to run .EXE or .COM files from a TSR. Source code included. No royalties.

List: \$249 Ours: \$225
FAXcetera #: 2089-0002 Return: F

TSRific

South Mountain Software, Inc.

TSRific lets you write Terminate-Stay-Resident (TSR) programs that automatically swap DOS memory with another program. TSRific requires a single function call and uses only 14K or less of RAM. Features include swapping to XMS, EMS or disk; Saves/Restore text and graphics screens; user definable Hot-Key. TSRific is easy to use and is compatible with a wide variety of languages. Supports Borland C/C++, Turbo C/C++, Borland Turbo Pascal, Microsoft C/Quick C, Microsoft Quick BASIC, dBASE III and IV, FoxPro and Clipper. No royalties. Requires 14K memory. Hard disk recommended.

List: \$99 Ours: \$89
FAXcetera #: 2089-0018 Return: F

Turbo C TOOLS 6.0

Blaise Computing Inc.

Provides the sophisticated, bullet-proof capabilities needed to write applications, including windowing systems with virtual stackable menus and windows with optional borders and drop shadows; full mouse support integrated within the windowing and menu systems. Routines for building ISRs and TSRs are provided. Supports all versions of the Borland C and C++ DOS-made compilers.

List: \$169 Ours: \$135
FAXcetera #: 1652-0002 Return: F

C-GRAPHICS

Baby Driver II 2.0

Autumn Hill Software

A printer interface library for the C and C++ developer wishing to provide integrated printer support from an application. The Printer Interface Library supports over 300 printers of all kinds, and allows printing of text and graphics on any supported printer. The Printer Interface Library also allows you to control scale, rotation, position, palette and dithering. The Presentation Graphics Option adds a graphics primitive library for producing high-quality graphics images at the maximum resolution of any printer. This option gives you EMS/XMS support, 8-bit color support, HP Soft Font capabilities, and more.

List: \$295 Ours: \$266
FAXcetera #: 2263-0002 Return: F

Essential Graphics GUI 1.5

South Mountain Software, Inc.

Essential Graphics GUI is a C programming tool kit for creating graphical user interfaces. GUI provides a wide variety of predefined high level objects including pop-up and pulldown menus, vertical and horizontal menus, data entry objects, list and prompt boxes, radio buttons, percent bars, boolean objects and more. These objects may be used independently or in combination to build customized objects. Full mouse and keyboard support is built directly into each object. A comprehensive and easy to use manual with demos and plenty of examples is included. Essential Graphics GUI requires Essential Graphics Kernel. Source code version comes with a limited 30 day money back guarantee (source diskette envelope must remain sealed). No royalties.

List: \$149 Ours: \$135
w/source: List: \$298 Ours: \$268
DOS extender List: \$498 Ours: \$359
FAXcetera #: 2089-0015 Return: O

Corporate Accounts...Call (800) 422-6507



BABY DRIVER II

printer interface library

presentation graphics option

Print text and graphics on more than 300 printers, with control of scale, rotation, position, palette, and dithering. Multiple IO methods. Driver editor and other utilities included. Full 30-day money-back guarantee, no royalties.

Adds a complete graphics primitive library to the Baby Driver Kernel. Draw at max printer resolution on any printer, with EMS/XMS support, 8-bit color support, HP Soft Font capability, and lots more. Requires the Baby Driver Kernel.

DOS Version
just \$295.

DOS Version
just \$100.

ORDERS PLACED
BEFORE 2 PM
FOR PRODUCTS
IN STOCK ARE
SHIPPED THE
SAME DAY!



Essential Graphics Kernel 4.0

South Mountain Software, Inc.

A fast powerful and easy to use graphics library for C programmers. Includes over 250 functions for dots, lines, arcs, circles; character fonts (bit image and vector); world and viewport coordinates; PCX imaging scaling. Supports CGA, EGA, VGA, 8514, Hercules, VESA and most SuperVGA cards. Hardcopy output to most dot matrix printers, HP Laser Jets, PaintJets and HPGL plotters. Includes a virtual printer driver which utilizes EMS/ RAM/disk support high resolution printouts. Includes comprehensive manual with demos and examples. See Essential Graphics chart for 2D and 3D charting and Essential Graphics GUI for user interfaces. Source code version comes with a limited 30 day money back guarantee (source diskette envelope must remain sealed). No royalties.

List: \$199 Ours: \$179
w/source List: \$398 Ours: \$358
DOS Extender v. List: \$399 Ours: \$358
w/source List: \$598 Ours: \$419
FAXcetera #: 2089-0016 Return: F

Essential Graphics Chart 4.0

South Mountain Software, Inc.

A complete set of 2D and 3D charting functions. Essential Graphics Chart includes true 3D charting with multi-view and multi-perspective screen output. Support for 3D bar, pie and pyramid charts is provided along with a wide range of 2D charts such as bar, line, pie and scatter. Legends are provided with all charts and may be configured in a variety of ways. Chart gives you complete control over all aspects of your graphs. Titles, labels, colors and other characteristics may be set up manually or displayed using defaults. Multiple graphs may be displayed on screen in separate viewports and our own 2D charts provides a user graph type for customizing your own charts. Essential Graphics Chart requires the Essential Graphics Kernel for its low level drivers. Source code version comes with a limited 30 day money back guarantee (source diskette envelope must remain sealed.) No royalties.

List: \$199 Ours: \$179
w/source List: \$998 Ours: \$898
DOS Extender v. List: \$399 Ours: \$358
w/source List: CALL Ours: CALL
FAXcetera #: 2089-0017 Return: F

FONT-TOOLS 1.0b

Autumn Hill Software

A solution to the problems of creating, editing and using fonts within a graphics application, FONT-TOOLS includes: a versatile mouse-driven graphics-based font editor; several utilities for resizing and modifying font files, viewing fonts, converting font files and downloading fonts to an HP or compatible laser printer; 100 sample font and icon files; and a complete font function library containing over 40 functions. Uses the GEM font format created by DRI so screen fonts supplied with products such as Ventura and GEM Draw are completely compatible. Up to 10 fonts can be loaded and active at any time, each with its own set of drawing parameters.

List: \$165 Ours: \$149
FAXcetera #: 2263-0001 Return: F

**WE ACCEPT
MAJOR CREDIT
CARDS ►**

GraphiC 6.0

Scientific Endeavors Corporation

A set of C-callable routines which can be used to create publication quality scientific and engineering graphics. Output files can be converted to PIC, GEM, PostScript, TIFF, or HPGL formats. Features include routines for creating linear, log, semi-log, contour, polar, 2D and 3D bar, and error function plots, Smith, bar and pie charts, full set of 3D routines, mathematical functions, labeling, 22 high-resolution fonts, full PostScript and most hardware support. Comes with source code.

List: \$465 Ours: \$419
FAXcetera #: 1468-0001 Return: L, N

GFX Fonts & Menus Library

C Source Inc.

C library of screen fonts for use with GFX or other graphics systems. Positions character at any pixel. Writes text with transparent background. Provides functions to format and position text.

List: \$150 Ours: \$135
FAXcetera #: 1012-0001 Return: F

GFX Graphics Library

C Source Inc.

Graphics routines library. Provides set of drawing functions, moveable viewports, C source code, setting of graphics modes, auto-scaling and color control.

List: \$150 Ours: \$135
FAXcetera #: 1012-0002 Return: F

GFX Screen Dump Library

C Source Inc.

Dumps graphics screen to printer. Supports most dot matrix, laser and color printers. Allows user to add new printers by filling in table. Stretches output to adjust for differences between video and printer resolutions.

List: \$100 Ours: \$90
FAXcetera #: 1012-0003 Return: F

ICON-TOOLS 2.1+

Autumn Hill Software

Designed to provide a standalone graphics tool that allows you to create, edit, display and manipulate icons from a graphics application. ICON-TOOLS consists of a complete icon editor, an icon modifier utility and an icon view/print utility, plus a complete function library and a full set of sample icons. Function library includes functions for loading and drawing icons, drawing and processing icon menus and even functions for animation. Mouse support for graphics environments is also included. Over 500 separate icons are provided that can be utilized "as is" or as models for creating custom icon sets.

List: \$165 Ours: \$149
FAXcetera #: 2263-0004 Return: F



Menuet 2.0

Autumn Hill Software

A GUI toolkit which is implemented as a callable function library with over 500 high-level function calls. Features include: horizontal bar and pulldown menus; dialog boxes; icons; buttons; radio buttons; data entry forms; scrollable lists; moveable and resizable windows; and a wide variety of widgets including user-defined widgets. Menuet also features: Interface Design Tool—allows rapid prototyping of windows and forms; full on-line documentation; and complete icon and font editors. Menuet's functions can be accessed directly from your program editor using the UpShot access engine installed as a TSR.

List: \$325 Ours: \$275
FAXcetera #: 2263-0003 Return: F

PiXelPrint 1.2A

Autumn Hill Software

PiXelPrint is a utility for printing a wide range of graphics file formats on any of over 200 printers. PiXelPrint uses Autumn Hill's own Baby Driver technology (see separate description). PiXelPrint is designed for printing bitmapped images. The supported graphics file formats include: ART; IMG; PCX; TIF; and WPG. PiXelPrint provides a built in PCL command interpreter for use on HP and compatible printers and can be used in command line, interactive or batch modes. This allows access to downloaded soft fonts and PCL graphics commands. PiXelPrint will utilize either conventional or EMS memory.

List: \$125 Ours: \$113
FAXcetera #: 2263-0005 Return: F

**FOR FAXcetera®
INSTRUCTIONS
TURN TO PAGE 176.**

SUNSHOW "C" Language IMAGE LIBRARY 1.4

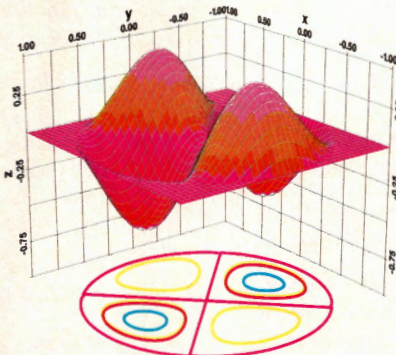
Sun Country Software

A raster-based image toolkit that comes with Microsoft C and Borland Turbo C interfaces, and also special interfaces to Clipper, R:Base, and Sophco's Force. Low level and powerful. Requires an understanding of imaging. Includes over 80 functions: display image, grab screen & grab window, scale, clip, format conversion, flip, rotate, histogram modification, color to mono, merge images with text, push & pop windows, graphic mode text-handling & sunprints as well as SUNGET and SUNSAY functions, draw line, draw ellipse, draw box, drivers for various color/monochrome scanners (Sharp, Howtek, Microtek, etc.) and image capture boards (Targa, Visions, ATronics, ComputerEyes, etc.), as well as a number of other useful functions. It supports industry standard GIF, Targa, PCX, TIF formats. It includes video drivers supporting many SVGA display adapters to 1024 x 768. Includes graphic printer support for Epson dot-matrix compatibles and Hewlett Packard LaserJet II printers, all of which can print to the maximum resolution of the printer. Proprietary color quantizing algorithm from 24-bit downward.

List: \$350 Ours: \$315
FAXcetera #: 2989-0001 Return: N



Graphic Scientific Graphics



"All of the C language routines you need to write an impressive scientific graphing program of your own. Highly recommended."

PC Magazine 3/14/89

- Shaded contour & 3-D plots
- Color PostScript® and EPS
- Export HPGL/2 and TIFF files
- Use TIGA, DGIS, 8514 and most other graphics cards
- Simultaneous plots
- Color separations
- European characters
- Polar contour plots
- Linear & log plots, Smith, bar, & pie charts, error functions, triangle plots
- Source code for complete control
- 286 Extender version runs in protected mode. Use with Borland C/C++ 3.1.
- **NEW!! Windows version**
Allows you to do graphics in Windows™ with no Windows programming knowledge.

Scientific Endeavors Corporation

508 N. Kentucky Street, Kingston, TN 37763

Orders: (800) 998-1571

(615) 376-4146 FAX: (615) 376-1571

Virt-Win 1.0 TeraTech

Virt-Win gives you virtual windowing and display power! Written in assembly, Virt-Win lets you write complex displays to memory and snap them on in an eye blink. Take partial screen snapshots and cut and paste screen segments. Virt-Win supports Herc, CGA, EGA, VGA, and SVGA. Windowing system allows an unlimited number of overlapping windows that can move, resize, shadow, and explode! Contents may be bigger than physical window and can be panned and zoom at will. No royalties.

List: \$299 Ours: \$269
FAXcetera #: 1972-0015 Return: F



Victor Image Processing Library 2.2 Catenary Systems

Powerful gray scale and color image processing library. Brightness, contrast, sharpen, outline, resize, rotate, flip, overlay, matrix conv, etc. Color reduction: 24-bit to 8-bit to 256 or fewer colors. Process multiple, single, or partial images of any size, with support for expanded, extended, and conventional memory. Convert 24-bit RGB to SVGA/VGA/EGA images. TIFF/PCX/GIF/TGA bin file formats. Supports EGA/VGA/SVGA up to 1024x768 in 256 colors and 800 x 600 in 32,768 colors. Print any size on laser printer. Scan gray scale images into expanded/extended/conv mem with HP ScanJet scanners. No royalties.

List: \$195 Ours: \$175
w/source: List: \$295 Ours: \$265
w/color reduction source
List: \$495 Ours: \$445
FAXcetera #: 2686-0001 Return: F

LEX/YACC

MKS LEX & YACC 3.1 Mortice Kern Systems

MKS LEX & YACC are compiler construction tools for PC. Together they act as a program generator that takes descriptive input and writes a program module, giving users fast, compact, highly portable code. MKS LEX is a scanner generator which takes a stream of characters as input and outputs a stream of tokens. MKS YACC is a parser generator which can take any language specification as input and create output of straight C, C++, and/or Pascal code which will compile and run with standard C, C++ and Turbo Pascal (4.0 and above) compilers.

List: \$249 Ours: \$205
FAXcetera #: 1634-0002 Return: F

ON PAGES 11 & 12.

PCYACC 3.01

Abraxas Software

PCYACC is a complete language development environment that generates ANSI C source code from input language description grammars for building assemblers, compilers, interpreters, browsers, page description languages, language translators, syntax directed editors, language validators, natural language processors, expert system shells, and query languages.

List: \$495 Ours: \$470
FAXcetera #: 2006-0001 Return: F

LINT UTILITIES

PC-lint (MS-DOS or OS/2) 4.0 Gimpel Software

A diagnostic facility for C that will find bugs, glitches and inconsistencies that your compiler working on one module at a time will miss. Supports full K&R and ANSI C, Microsoft and Turbo keywords, include file directories and indirect files. Use PC-lint to find inconsistent declarations, argument/parameter mismatches, uninitialized variables, unaccessed variables, variables assigned but not used, suspicious macros, indentation irregularities, function inconsistencies, unusual expressions, printf-scanf irregularities and more. Fully customizable: all error messages can be selectively inhibited; size of scalars can be altered (for porting); four memory models are supported; format of error messages can be adjusted; etc. Features automatic generation of declarations (prototypes), wild-card support, auto help, incremental linting using lint object modules, and checks on weak definials. It works with any C compiler or cross-compiler. PC-lint 386, for the power user, has all the features of PC-lint MS-DOS but is bound with a DOS extender to allow you to use all the memory in your machine.

List: \$139 Ours: \$95
386 List: \$239 Ours: \$205
FAXcetera #: 1247-0001 Return: F

MEMORY MANAGEMENT

"C" EMM Library 1.00

SilverWare, Inc.

The "C" EMM Library is a collection of more than 60 functions. Each low-level function provides a consistent, comprehensive "C" interface to the Expanded Memory Manager. The Library also includes high-level functions allowing the programmer easy access for allocating and mapping expanded memory pages.

List: \$199 Ours: \$179
FAXcetera #: 1678-0001 Return: O
Unconditional Money-Back Guarantee

E-MEM

TeraTech

E-MEM gives your program access to more memory. E-MEM transparently allocates, reallocates and frees megabytes of EMS or XMS memory. Support is also provided to access UMBs, the HMA and "raw" extended memory. No royalties. Assembly source code available separately.

List: \$99 Ours: \$90
FAXcetera #: 1972-0012 Return: F



PC-lint 5.0 presents C Bug # 778

```
#define FA 0x1      /* Flag A */
#define FB 0x2      /* Flag B */
#define FC 0x4      /* Flag C */

#define BOTH (FA | FC) /* both flags */

int select(unsigned n)
{
    if( n & (BOTH & FB) ) return 1;
    else return 2;
}
```

There's something blatantly wrong with this function. Can you or your compiler spot it? Call if you need a hint. Refer to Bug #778.

PC-lint will catch this and many other C bugs. Unlike your compiler, PC-lint looks across all modules of your application for bugs and inconsistencies.

New - Optional Strong Type Checking and variables possibly not initialized.

More than **330 error messages**. More than **105 options** for complete customization. Suppress error messages, locally or globally, by symbol name, by message number, by filename, etc. Check for **portability** problems. Alter size of scalars. Adjust format of error messages. Automatically generate ANSI prototypes for your K&R functions.

Attn: Power users with huge programs.

PC-lint 386 uses DOS Extender Technology to access the full storage and flat model speed of your 386. Now fully compatible with Windows 3.0 and DOS 5.0

PC-lint 386 - \$239

PC-lint DOS - OS/2 - \$139

Mainframe & Mini Programmers

FlexeLint in obfuscated source form, is available for Unix, OS-9, VAX/VMS, QNX, IBM VM/MVS, etc. Requires only K&R C to compile but supports ANSI. Call for pricing.

Gimpel Software

3207 Hogarth Lane, Collegeville, PA 19426

CALL TODAY (215) 584-4261 Or FAX (215) 584-4266

30 Day Money-back Guarantee.

PA add 6% sales tax.

PC-lint and FlexeLint are trademarks of Gimpel Software



YOUR ORDER TODAY!

Simplify Real-Time Programs with

INTERWORK™

Concurrent Programming Toolkit

Version 3.1 now available

Interwork is a "C" program library that lets you write your programs as a set of cooperating, concurrent tasks. This greatly simplifies programming for real-time applications, simulations, and other parallel programs. Interwork gives you much more control and efficiency than do heavyweight, multi-tasking operating systems.

FEATURES

- Unlimited number of tasks with very fast context switching using optional, fully preemptive, time-sliced scheduling. Tasks have full control over preemption and their time-slice sizes.
- Full inter-task communication using shared memory. Includes semaphores, queues, event variables, mailboxes.
- Enhanced interrupt and trap handling facilities. Write interrupt handlers as C procedures and block tasks on interrupts.
- Enhanced facilities for managing task stacks.
- Debugging, tracing and exception handling facilities.
- Expanded user's guide with examples and complete reference manual with on-line documentation. ANSI compliant header files.

"Interwork has been running flawlessly for over two years."
— Glenn Catarious, Quadis, Inc.

Interwork is available for the following systems:

IBM PC, XT, AT	PC-DOS 2.0 or later	\$269
Intel 386	UNIX V.3/386	\$369
DEC VAX, Sun	UNIX BSD, Sun OS	\$369

PC-DOS version is compatible with Borland and Zortech C/C++ compilers (large model) and Microsoft, and Lattice C compilers (large and small models). Please specify hardware and operating system when ordering. Shipping and handling free within continental U.S.; COD orders add \$5; international orders, add \$25; Canada, add \$12. Send check or money order to:



Block Island Technologies
Innovative Computer Software

15455 NW Greenbrier Parkway, Suite 210, Beaverton, Oregon 97006
Tel. (503) 690-7181 FAX (503) 645-7732

Trademarks: Interwork, Block Island Technologies; UNIX, Unix System Laboratories; VAX, Digital Equipment Corporation; Sun, Sun Microsystems, Inc.

Far Memory Manager & Debugging Library Dolphin Software

Allows effective and error-free use of all memory in the first 640K. Provides dynamic allocation of blocks and multi-dimensional arrays with reduced risk of heap fragmentation. Does array bounds checking and allows extensive error detection. Represents video memory as a 2D array. Memory operations optionally recorded in a debugging log. Numerous far heap reporting functions. Supports Turbo C/C++ and Microsoft C (5.10/6.00).

List: \$125 Ours: \$99

w/source List: \$175 Ours: \$139

FAX cetera #: 3019-0002 Return: L

Tics Realtime Multitasking Kernel 1.03

Tics Realtime
Allows programmer to develop real-time multi-tasking programs that run under MS-DOS or stand alone on an embedded target. Written almost entirely in ANSI C. Requires Turbo C++ 1.0 or higher for MS-DOS operation. Full C source code is available separately allowing Kernel to be easily ported. Feature: pre-emption, non-preemption, and timeslicing in any combination; ROMable; priorities; messages; mailboxes; regions; comprehensive sample application code & more.
List: 299 Ours: \$269
FAX cetera #: 1004-2901 Return: F

MULTITASKING LIBRARIES

Interwork™ Concurrent Programming Toolkit 3.1

Block Island Technologies

Interwork is a C program library which lets you write your programs as a set of cooperating concurrent tasks. Useful for real-time applications, simulation, and parallel programming. Features: unlimited number of tasks, very fast context switching, time-sliced or optional non-preemptive task scheduling, inter-task communication facilities (shared memory, semaphores and more), interrupt and trap handling, and debugging facilities. Extensive user's manual. PC DOS version is compatible with Borland and Zortech C/C++ Compilers (large model) and Microsoft and Lattice Compilers (large and small models).

List: \$269 Ours: \$242

for UNIX: List: \$369 Ours: \$329

FAX cetera #: 2808-0001 Return: L

TimeSlicer Lifeboat Software

Create real-time, multi-tasking programs at the application level rather than interfacing with the operating system. Install to replace or complement any interrupt service routine (ISR) and the programmer has total control over whether and when the original service routine should execute. Create, suspend, restart or terminate Tasks at runtime. Control the preemption system. The tasks are C functions which, by default, run in a time-sliced, round-robin fashion. Task scheduling allows any task to be scheduled to run immediately rather than having to wait for its turn. Critical resource management functions allow non-reentrant code to be shared by concurrent tasks. Supports Microsoft C 6.0 small and large memory models.

List: \$295 Ours: \$266

w/source List: \$1000 Ours: \$899

FAX cetera #: 0233-0002 Return: L

Get Virtual Screens !



Worried about your program's video performance? Then get **Virt-Win™** and take control of your displays!

- **Virtual Video:** Write to virtual screens and snap on your display in an eye-blink!
- **Screen Modes:** Text or graphics—CGA, Herc, EGA, VGA, SVGA,...
- **Window Control:** Move, shadow, resize, explode windows. Pan and Zoom contents. Infinite overlap!
- **Speed:** Virt-Win is written in ultra-fast assembler!
- **It's Easy:** Easy to use, Virt-Win is \$299. Order before November 30, 1992 and pay the low introductory price of just \$199—a \$100 savings!

Get Extra Memory ! Unstrangle your C program's memory shortages with E-MEM!

- **More Memory:** Allocate Megs of RAM! Transparently use EMS/XMS.
- **More Speed:** E-MEM is much faster than disk! One user reported an 18,000% speed gain!
- **More Fun:** Process all your data at once: no need to juggle data in conventional memory! E-MEM also gives you access to UMB, HMA and raw memory!
- **It's easy:** E-MEM is easy to use and is just \$99!



Unconditional 60 day Money Back Guarantee. *Visa, Mastercard, check and POs.
Call for **FREE** Booklet of C, BASIC, & Visual Basic products.

TeraTech, Inc
Tools for Programmers

(800) 447-9120 ext. 155
3 Choke Cherry Road, Suite 360
Department 155 Rockville, MD 20850
Int'l: +1 (301) 330-6764
FAX: (301) 963-0436
BBS: (301) 963-7478

Victor

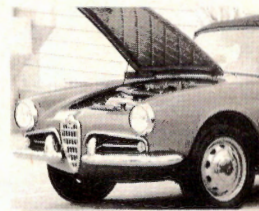
Now includes color reduction

Image Processing Library

Create Powerful Image Applications

Use the Victor Library (with over 150 functions)

- Load and save
TIFF/PCX/GIF/TGA/bin
- Work with large images in expanded or extended memory
- Powerful grayscale and color image processing: brightness, contrast, sharpen, outline, linearize, overlay, matrix convolution, rotate, resize, and more
- Color reduction: 24-bit to 256 or fewer colors, VGA to EGA
- Control ScanJet scanner
- Print image at any size and resolution on laser printer
- Display images on
EGA/VGA/super VGA up to 1024 x 768 in 256 colors or 800 x 600 in 32,768 colors



Victor Image Processing Library
\$195

Call or fax to order
314-962-7833

Catenary Systems

470 Bellevue St Louis MO 63119

voice/fax 314-962-7833

Victor Image Processing Library supports Microsoft and Borland C/C++ compilers. No royalties. Source code available.

NEURAL NETWORKS

AT BiosKit Annabooks

The AT BiosKit gives you a complete bios with source code in C you can modify for your own applications. The BiosKit includes a Bios on diskette ready for programming eproms, and includes the utilities you need to ROM the source code. The Bios also has a ROM monitor/debug and setup. At last you have control over the core of your system.

List: \$199 Ours: \$179
FAXcetera #: 1005-3601 Return: L

N-TRAIN™ 1.02

Scientific Consultant Services, Inc.

Develop software that learns from experience and analyzes complex, real-world data. N-TRAIN for C provides easy access to the power of neural networks. This library supports 32-bit compilers, in-line 80x87 code, and includes functions for training, testing, and running neural nets. Clean programmer interface makes neural programming a pleasure. N-TRAIN neural shell, a complete neural network development tool based on N-TRAIN for C is the fastest way to train neural nets. Easily handles difficult data and large problems. Allows complete user control. Available for 386/486 and MicroWay's 860 card.

for C: List: \$329 Ours: \$279
w/source List: \$469 Ours: \$399
neural shell: List: \$329 Ours: \$279
FAXcetera #: 1004-5401 Return: L



SCREENS/WINDOWS

C-scape with Look and Feel 3.2 Liant Software Corporation

A development tool for creating portable user interfaces for C programs. The C-scape system consists of two pieces that may be used individually or together: Look and Feel Binary and the C-scape library. The Look & Feel Screen Designer is a free-form screen editor for designing and creating screens for C programs. The C-scape library includes functions for data entry and validation, windows, menus, text editing and help screens. C-scape's open architecture lets you create your own new field and validation types. C-scape works in both text and graphic modes. Windows can include bit-mapped or user-supplied images. Other features of C-scape include: built-in error checking, mouse support and support of Hercules, CGA, EGA and VGA (including 43 line mode) monitors.

List: \$499 Ours: \$425
FAXcetera #: 1952-0010 Return: F

C-Worthy User Interface Development System 2.0 Solution Systems

Build and test your interface on-screen without coding, recompiling or relinking. cwArchitect now includes menus, interactive color and message librarian in addition to forms for faster, easier interface design. Optional drop shadows, customizable buttons, graphics mode support, on-line reference guide for MS C 6.0, ANSI variable argument support, internationalization capability and more.

List: \$449 Ours: \$399
w/source: List: \$649 Ours: \$579
FAXcetera #: 1271-0002 Return: L

Designer QuickWindows 1.5

Software Interphase, Inc.

A companion "CAD" program for QuickWindows Advanced. Hit CTRL-D from inside the QuickBASIC environment to run Designer. Use the mouse or keyboard to lay out the windows, dialog boxes, and data-entry screens. When you are finished, Designer will write BASIC source code for that screen and merge it into your program.

List: \$69 Ours: \$62
FAXcetera #: 1767-0002 Return: L

Greenleaf DataWindows™ 2.13

Greenleaf Software, Inc.

Powerful and easy to use, Greenleaf DataWindows™ can bring logical overlaid windows, transaction data entry, pull-down, pop-up, Lotus™-style menus, plus list boxes to your applications. Features include up to 254 simultaneous windows with complete overlay and fully automatic repaint capability, device independence, three kinds of contact sensitive help, keyboard idle and mouse/keyboard driven menus that are infinitely nestable, and dynamically reconfigurable. Transaction oriented data-entry features scrollable subforms, memo and tickertape fields. Versions for DOS, DOS 386 Protected Mode using Phar Lap & WATCOM or Metaware, OS/2, SCO XENIX/UNIX, AT&T System V, and Interactive. Terminal definition compiler included with multi-user versions. Call for UNIX pricing.

List: \$395 Ours: \$335
FAXcetera #: 1035-0002 Return: L

Greenleaf Makeform 2.0

Greenleaf Software, Inc.

Form design tool which can be used in conjunction with Greenleaf DataWindows™ to reduce program size and allow you to modify data entry fields and rearrange forms without recompiling or linking. Creates a resource file that is read by DataWindows at runtime. Ability to define, add, select, copy, move, delete and insert data entry fields (including subforms, tickertape and memo) and associated prompts cut and paste within/between forms, compress/expand forms, and test forms easily.

List: \$249 Ours: \$215
FAXcetera #: 1035-0010 Return: F

PANEL Plus II 2.2

Roundhill Computer Systems Ltd.

Consists of a user interface library together with tools to design screen layouts and generate C or MS-FORTRAN code for screen definitions. C language applications can be ported between DOS, Windows, OS/2, Unix, and VMS with minimal source changes. Full library source is included, no royalties.

List: \$495 Ours: \$446
FAXcetera #: 1057-0001 Return: F

POWER SCREEN

Blaise Computing, Inc.

Power Screen is a screen management system designed to make it easy for you to create powerful data entry applications quickly, with virtual screens as large as 255 columns or 255 rows. Supports Turbo C, Turbo C++, Borland C++, Microsoft C 5.0 or later and Turbo Pascal.

List: \$169 Ours: \$135
FAXcetera #: 1652-0006 Return: F

SEE PAGE 176 FOR FAXcetera® INSTRUCTIONS!

N-TRAIN™

NEURAL NETWORK FUNCTION LIBRARY & DEVELOPMENT TOOLS

Develop high-performance systems that *learn from experience*.

N-TRAIN for C makes neural network application development quick and easy:

- *** support for 32-bit compilers: no messy memory segments so large problems are easy to address
- *** algorithms coded in double-precision for reliable, numerically stable learning
- *** optimal use of co-processor means fast results—preliminary tests show N-TRAIN to be nearly 50% faster on large problems than the leading neural network development shell
- *** clean programmer interface: logical, easy to use function calls make programming a pleasure
- *** fine control over detail: learning rates, transfer functions, etc. may be controlled both globally and on a per-layer basis

N-TRAIN neural shell for the 386/486 or Microway's 860 card is the tool of choice for neural systems development: Based on N-TRAIN for C, it is fast, reliable and powerful. Trains neural nets on difficult data, easily handles large problems, allows for complete user control. As one user in the financial community said:

"N-TRAIN is the first off-the-shelf neural network program that truly trains and converges on stock market data. I previously used BrainMaker and NeuroShell, but N-TRAIN is the best and fastest product out there"

—Marc Chaikin, Technical Analyst, Developer of "Chaikin Oscillator"

For free Guide to Information & Products and our article "The Practical Development of Neural Network Forecasters..." (Technical Analysis, April 1992) contact:

SCIENTIFIC CONSULTANT SERVICES, INC.

20 Stagecoach Rd., Selden, NY 11784; (516) 696-3333

Ad prepared 7/92. Copyright (c) 1992 SCS, Inc. All rights reserved.

BIOS

SOURCE CODE

The AT BiosKit gives you a complete Bios with source code in C you can modify for your own applications! The BiosKit includes a Bios on diskette ready for programming Eproms, and includes the utilities you need to Rom the sources Code. The Bios also has a Rom Monitor/Debug and Setup. At last you have control over the core of your system. Over 380 pages, with diskette, \$199. The XT BiosKit is only \$99. The Megatol Wildcard Supplement for the XT BiosKit is \$49. Software tools: You need MS C and MASM 5.1 for modifying the Bios.

FREE We'll include a free copy of the pocket-sized **XT-AT Handbook** by Choisser and Foster with each BiosKit if you mention this ad when you order. Of course, this \$9.95 value is also available by itself. Or buy five or more for only \$5.00 each.



800-462-1042

619-673-0870



Annabooks

15010 Avenue of Science, Suite 101
San Diego, CA 92128

FAX 619-673-1432

Money-back guarantee

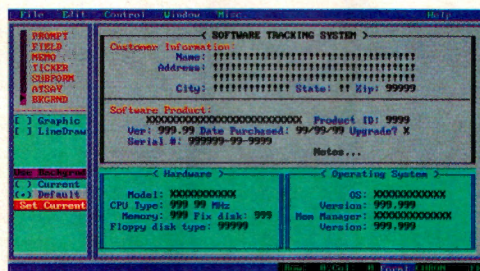
**NEW!
VERSION 3.0**

Creative User Interfaces

**Greenleaf DataWindows and MakeForm
accelerate text mode user interface development in C**

Data Entry, Menus for C Programmers

- ☐ The functions and tools of Greenleaf DataWindows make user interface design easier and *SO MUCH* faster!
- ☐ Making a window invisible and repainting the underlying screen takes a *single function call* with DataWindows. We do the grunt work so you don't have to!
- ☐ Logical attributes for device independence, autodetection of display type—a great many details are attended to automatically.
- ☐ Fully mousable user interfaces—menus, data entry and dialog boxes.
- ☐ Pushbuttons, radio buttons, check boxes.
- ☐ Support for all VESA VGA text modes.
- ☐ Pull-Down, Pop-Up or Lotus style menus with infinite branching and runtime extensibility, 3 kinds of help and hundreds of other features!
- ☐ A sophisticated data entry engine handles your database record as an entire transaction (unless all fields check out, the record isn't updated).
- ☐ Scrollable subforms, memo and tickertape fields, nested transactions, choice boxes.
- ☐ Pop-up subforms save screen space!
- ☐ 19 kinds of function hooks for state-change programmability—and so much more!
- ☐ Forms larger than the display scroll any direction—automatically or on call.
- ☐ Save windows with text and attributes to disk—pop them up any time.
- ☐ Data entry and menus use logical windows so you don't have to concern yourself with details like updating the screen!
- ☐ User input functions monitor keyboard and mouse, with exciting extras like input redirection to a menu or string, Ctrl-Break handling.
- ☐ Documentation includes tutorials *AND* compilable examples of each function!
- ☐ Complete online documentation system including a *FREE* online help system engine! Other help engines supported too! A Greenleaf exclusive!



WHAT A SATISFIED USER SAYS:

*"The market is flooded with libraries that claim to rival Greenleaf's; however, we have found with a lot of pain and lost time no other...comes close! Greenleaf has passed with **HIGH MARKS.**"* Brett Vensen, President, Professional Software Technologies, Inc.

Versions for UNIX, DOS, 386!

- ☐ **Greenleaf DataWindows/DOS v3.0** for MS-DOS and Rational Systems DOS/16M DOS Extender and Phar Lap 286! DOS-Extender supports Microsoft C, Borland/Turbo C/C++, WATCOM C, Zortech C++ and TopSpeed C.
- ☐ **DataWindows/386 v3.0** supports Phar Lap 386! DOS-Extender and Rational Systems DOS/4G DOS Extender (for WATCOM C 386 or MetaWare High C), and Rational DOS/4GW (WATCOM). 32-bit flat model.
- ☐ **DataWindows/UNIX** supports SCO, Interactive and AT&T UNIX.
- ☐ **Greenleaf MakeForm v2.0** supports DataWindows series (runs on MS-DOS). MakeForm also available separately (requires DataWindows v2.13 or above).
- ☐ **No royalties!**
- ☐ **Money-back Guarantee!**
- ☐ **FREE library source code (annotated)!**
- ☐ **FREE Unlimited Support and BBS!**
- ☐ **Ask about Gold Support: updates on your desk as they are developed!**

Greenleaf Software Inc.
16479 Dallas Parkway, Suite 570
Dallas, TX 75248

NEW Screen Designer Tool Included

ALL NEW MakeForm™ v2.0

- ☐ Screen Designer for DataWindows—WYSIWYG data entry Resource Files made here!
- ☐ You can change forms *without having to change source, compile or link* because DataWindows reads and executes MakeForm Resource Files.
- ☐ Your state-change hooks (for validation, running totals, jumping in form, choice boxes, and other user capability) all work the same as if you designed the screen in C.
- ☐ Define any number of fields, scrollable subforms, tickertape or memo fields, prompts, and paint background and linedraw text on the screen.
- ☐ Save screen to compressed file (optional). Color scheme saved with screens.
- ☐ Cut and paste single/multiple objects between as many as 3 open resource files.
- ☐ Test form without leaving MakeForm. Completely customizable. Works on any text display including 43 and 50 lines.

Programmer's Paradise®

**To order today call:
1-800-445-7899**



QuickWindows Advanced 2.5 Software Interphase, Inc.

Provides you with a complete set of user interface routines that work in 26 text and graphics modes through Super VGA. Create windows (exploding and shadowed), multi-tasking pop-up and pulldown menus, contact-sensitive help windows, pick lists, message boxes, data entry forms with picture fields and dialog boxes. All interface elements are keyboard and/or mouse driven. Contains a full-featured icon and font editor. Comes with many example programs. No TSRs are required. Includes assembly language source code, Designer QuickWindows, FREE automatic updates and telephone technical support for one year.

List: \$149 Ours: \$134
w/source code List: \$349 Ours: \$314
corporate List: \$399 Ours: \$339
FAXcetera #: 1767-0003 Return: F

Vermont Views & Designer 3.0 Vermont Creative Software

A user interface development system that includes the interactive Vermont Views Designer and the Vermont Views Libraries. The C-language libraries consist of over 550 functions for creating and managing data-entry, menus, windows, help systems, keyboard handling, error handling and more. Each system is developed as a separate resource for easy use and learning. Functions allow an application to read in and use designer forms and menus or use generated source code equivalents. If needed, numerous hooks and low-level functions are provided for customized processing.

List: \$495 Ours: \$415
w/source List: \$890 Ours: \$765
FAXcetera #: 1204-0001 Return: O
No time limit, money back guarantee.

Vitamin C 4.0 Creative Programming Consultants, Inc.

Professional C functions speed development without sacrificing power and flexibility. Features include: multiple, overlapping; virtual, parent, child windows; input fields; push buttons; check boxes; radio buttons; list boxes; scroll bars; fully integrated mouse support; and more! Open architecture is full of hooks and provides easy customization and extensibility. Includes source code, telephone and BBS support. Applications royalty free.

DOS List: \$395 Ours: \$339
EXT. DOS List: \$495 Ours: \$399
FAXcetera #: 1437-0001 Return: L

VCScreen 2.13b

Creative Programming Consultants, Inc.
An interactive screen painter and code generator for use with the Vitamin C function library. Allows you to "draw" your input forms and windows using the interactive WYSIWYG design editor. Objects like input fields, output fields, headers & windows may be created, deleted, repositioned and modified quickly and easily. Configurable templates allow code generation for DOS or OS/2.

List: \$149 Ours: \$134
FAXcetera #: 1437-0001 Return: L

**SEE SPECIAL
BUNDLE OFFERS
ON PAGES 8 & 9
AND 19 OF THIS
ISSUE!**

ADDITIONAL C PRODUCTS

The C Shroud™ 1.0 Gimpel Software

An attractive vehicle for porting programs and libraries across a wide range of operating systems and machines. Many software developers, however, are reluctant to distribute their source code. Translate your C program into an obscure form, compilable but not understandable by humans. Features include: comment removal; identifier translation; optional replacement of it, it ...else, for etc. with more primitive structures; expansion of macros and headers, and more. Selected names, macros and header files can be protected from translation.

List: \$798 Ours: \$718
FAXcetera #: 1247-0002 Return: F



C-Vision™ 3.0 Gimpel Software

C-Vision will help you analyze, understand and maintain C source code. It has four main components. (1) It prints outlined listings of your code. (2) A cross-referencer provides detailed symbol descriptions including usage, data, type, arguments, return type and full test of macros. (3) The tree diagrammer can show many different views of your code. (4) The reformatter is customizable and reformats both code and comments. C-Vision completely supports K&R and ANSI C and can handle huge applications when run on a 386.

List: \$139 Ours: \$125
FAXcetera #: 1247-0004 Return: F

WE SHIP WORLDWIDE!
Orders placed before
2pm for products in
stock are shipped the
same day!

DataBoss Xbase Engine 1.0 Kedwell Software

New add-on module lets DataBoss C users Build C language relational database applications that are dBASE compatible. Use C's functionality and flexibility to quickly develop Xbase applications. Produces .DBF files and .NDX indexes in dBASE format, plus data entry screens, pop-up windows, menus, reports, mouse support, and more. Produces both single-user applications with no "per-user" fee for multiple users. Royalty-free: no runtime fees. Includes source code. Requires DataBoss 3.5.

List: \$99 Ours: \$89
FAXcetera #: 3758-0002 Return: F



Break Through The Barriers Develop a Better User Interface With Vitamin C

Vitamin C makes it easy to add a sophisticated user interface to your C and C++ applications. You'll get maximum results from Vitamin C's robust library of C functions, yet maintain full control over low level details.

Vitamin C's powerful line-up includes:

- Intelligent Windows
- Advanced Entry Fields
- Push Buttons
- Radio Buttons
- Check Boxes
- List Boxes
- Flexible Menuing
- Context Sensitive Help
- Fully Integrated Mouse
- Pop-up Text Editing

With Vitamin C you'll have the freedom to express your vision, not ours. Virtually every aspect of Vitamin C's look and feel can be customized at the global, window or object level without modifying the library source. That's flexibility.

So, break through the barriers, and speed your way to a better user interface.

Vitamin C carries our 30-day money-back guarantee, includes library source, and applications are royalty-free. Order today or send for a free information kit and demo disk.

Order Hotline 1-800-726-6447

Creative Programming

P.O. Box 112097
Carrollton, Texas 75011-2097 USA
(214) 245-9139 Fax: (214) 245-9717



Layout Power Tools I Objects, Inc.

The Layout Power Tools is a collection of blackboxes that provide commonly-needed capabilities for Layout users. This diverse collection of blackboxes provides both very low-level, highly technical capabilities (such as background timers), while other provide additional user interface capabilities such as enhanced 3-D buttons and window borders. A special Speak From Datafile blackbox lets you use any speech files generated by a MicroHelp (or compatible) sound capture system. The Layout Power Tools also include in complete record-level file manager. It supports simultaneous access to a file's information by multiple users on a local-area network (LAN). You can use the Lock a Record blackbox to prevent other users from accessing a record that you are working with (a common technique necessary for supporting local area networks).

List: \$50 Ours: \$45
FAXcetera #: 2919-0002 Return: O

LiveWindows 1.0 Software Interphase

LiveWindows is a combination video display/capture and image processing library. Display live NTSC or PAL video images from Laserdiscs, VCRs, and Camcorders. LiveWindows features real-time scaling of actual live full color video from 1/64 to full screen size, plus the ability to overlay VGA text and graphics. You can freeze video and perform image processing functions including brightness, contrast, sharpness, matrix conversion, histogram, and color and luminance masking. Output images to TIFF-G, TIFF-R, Windows BMP, and TARGA file formats. Full TV tuner and audio support. Supports most capture boards based on C&T 9001 PC Video Chip. Written entirely in assembly language. Capture board available direct from Software Interphase. Specify C (Borland Turbo C, Microsoft C, or Microsoft QuickC), Power Basic or Microsoft QuickBASIC and Basic PDS. Requires DOS 3.1 or later. 3.5" diskettes are available to registered users. Full 30 day guarantee. 2 lbs.

List: \$395 Ours: \$356
FAXcetera #: 1767-0004 Return: F

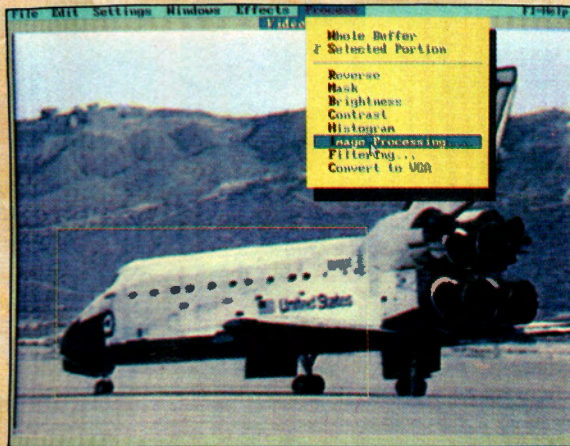
POWER SEARCH 1.0 Blaise Computing Inc.

A library of C functions designed to search for character strings or regular expressions in DOS and OS/2 based applications, by generating custom machine code while your application program is running and optimizing the code to compare text data against the specific pattern. Supports Turbo C, Turbo C++, Borland C++, and Microsoft C 5.0 or later.

List: \$169 Ours: \$135
FAXcetera #: 1652-0011 Return: F



We're Proud of Our Image!



Actual photograph of a Live Satellite feed.

Display. Freeze. Capture. Process. Live Video Effects. MultiMedia. LiveWindows for BASIC & C.

Now you can have the tools to develop video-based applications. Introducing **LiveWindows**, the first full-featured video library for programmers. Display real-time video from any NTSC or PAL source in a window. Smooth scaling to any size. Over 2 million colors. Live video effects including wipe, fade, and digital contouring. Image capturing and processing functions. Save to 24-bit TIFF or Targa files. Motion detection for surveillance. More features than we can list here! Supports most video cards based on C&T 9001 chip. 100% assembly language (under 28k)! We have video capture cards available. TV Tuner option. DOS version is shipping now. Call for Windows and Visual BASIC availability.

We also offer our best selling user interface library - **QuickWindows Advanced**. Use it to dress up LiveWindows or other applications. Add windows, pop-up and pull-down menus, SAA dialog boxes with 12 object types, icons, fonts, help system, powerful DOS functions, and much more. Mouse support built in. Over 180 functions. Supports all standard 26 text and graphics modes through VGA. 100% assembly language. The smallest library (typically 40k) with a powerful punch. Compare to any other TUI or GUI library

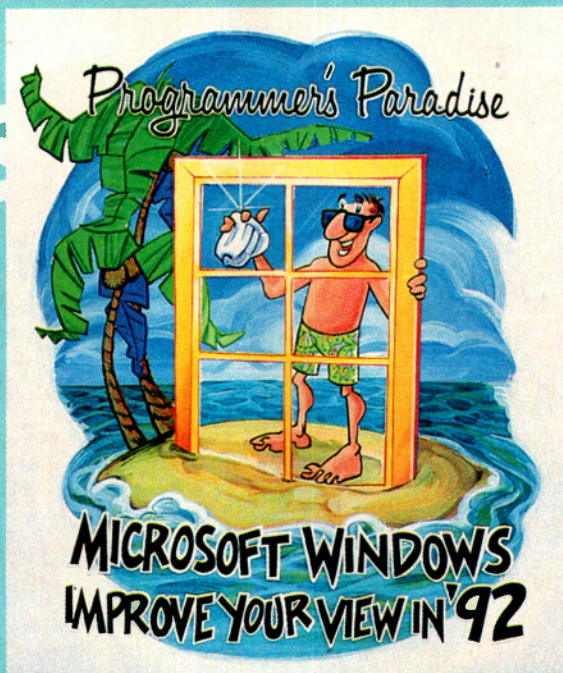
We have many tools to serve the professional programmer including a communications library (QuickComm), a robust library manager for BASIC (Visual Librarian), LiteSwitch task switcher in 1.5k, and more. No royalties. For BASIC and C.

CALL NOW for catalog and demo disk!
(800) 542-2742

SOFTWARE INTERPHASE INCORPORATED

82 Cucumber Hill Road, #211
Foster, RI 02825-1212
Voice: (401) 397-2340
Fax: (401) 397-6814

Micro



esoft®

Microsoft C/C++ 7.0

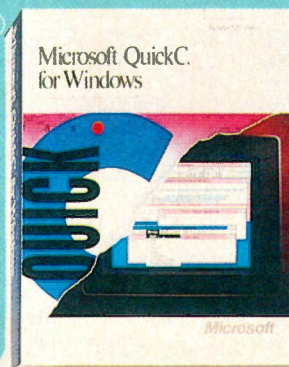
Microsoft C/C++ Development System for Windows is the best way to create Windows and MS-DOS Applications. Microsoft Foundation



Classes encapsulate full Windows functionality into 60 reusable classes, providing more of what you need. Use MFC with existing C code and make direct calls to the Windows API. Microsoft's compact P-code can reduce the size of generated code by as much as 50% and you get the

smallest, fastest code available from a PC-based C/C++ Compiler. Microsoft C/C++ 7.0 is the fastest, easiest, smartest way to create superior Windows and MS-DOS Applications.

SRP: \$499
OURS: \$309



Microsoft QuickC for Windows

A completely integrated development system for Windows, Microsoft QuickC for Windows lets you edit, compile, and debug inside a single environment. Draw the graphical elements of your Windows program and

let QuickCase:W generate commented expert-level C source code. Click on ToolBar™ for quick access to frequently-used functions, from changing fonts to setting breakpoints. You will find that Microsoft QuickC for Windows provides all the tools you need to create more applications in less time.

SRP: \$200
OURS: \$139

Microsoft®

Microsoft Test

Before you deliver your software, put it to the test! Microsoft Test for Windows makes comprehensive testing easier, reduces testing costs, and validates the quality of software as you write it, so that you can deliver better applications for Windows in less time. Test the production version of any application for the Windows environment. Capture simple test scripts with a recorder or create sophisticated scripts in the TestBasic macro language. Reduce overall testing time and increase testing accuracy. Catch bugs faster and produce fully functional programs in less time, for lower overall development costs.

SRP: \$395
OURS: \$275



Microsoft®

DOS DEVELOPMENT SOFTWARE

C++ LANGUAGE

COMPILERS

Borland C++ 3.1

Borland International

Borland C++ is the professional development system for serious application work. With full C/C++ compliance, powerful optimizations, templates, and enhanced performance, Borland C++ is the best and most productive system available for creating high-quality code in Windows 3.0, 3.1 or DOS environments. Creating Windows applications from within Windows is a pleasure with the Windows-hosted IDE that includes a graphical ObjectBrowser and speed bars for quick access to common functions. The WinSight utility tracks Windows messages to make debugging easier, and Resource Workshop allows you to visually draw Windows resources. Borland C++ includes Turbo Debugger, Turbo Profiler, and the object-oriented Turbo Assembler. List: \$495 Ours: \$319 FAXcetera #: 1861-0001 Return: O Full 60 day guarantee.

Borland C++ & Application Frameworks 3.1

Borland International

Borland C++ & Application Frameworks helps you create great Windows or DOS applications by supplying sophisticated ready-made user interfaces that can be bolted onto your application with just a few lines of code. ObjectWindows for Windows or Turbo Vision for DOS - both give you pull-down menus, dialogs, mouse support, etc. You also get all the great Borland C++ features: full C++ compliance, global optimizations, DPML, enhanced performance, and more. Also included are Resource Workshop, Turbo Debugger, Turbo Profiler, and object-oriented Turbo Assembler, and source code for ObjectWindows, Turbo Vision, and Runtime Library. Fully supports Windows 3.0 and 3.1. List: \$749 Ours: \$549 FAXcetera #: 1861-0024 Return: O Full 60 day guarantee

INTEK C++ 2.0

Draiken Software, Inc.

INTEK C++ is a true 32 bit C++ compiler. Produces the only standardized C++ output, AT&T, and can be targeted to any back end of the user's desire. INTEK C++ has been designed to allow the user to move his code from different environments in both the binary and object code format. It also allows the user to continue to use their existing code and technology, (C Compilers and related utilities) in their move to the C++ language. List: \$495 Ours: \$446 FAXcetera #: 1002-5901 Return: F

LPI-C++

Liant Software Corporation

LPI-C++ is a true 32-bit compiler implementation of the AT&T specification as defined in The Annotated C++ Reference Manual, by Ellis and Stroustrup. LPI-C++ supports the full C++ language including multiple inheritance, nested types, protected derivations, member pointers, and heap management. LPI-C++ gives you compile-time selection of compatibility modes, which allows programs written for cfront C++, ANSI C, and K&R C to be compiled correctly. It includes complete implementation of 2.0 iostream and complex class libraries; ANSI

C libraries, plus an interface from C++ to ANSI C libraries; and the Rogue Wave Tools C++ library.

List: CALL Ours: CALL FAXcetera #: 1952-0011 Return: F

Microsoft C/C++ Development System for Windows 7.0

Microsoft Corporation

The Microsoft C/C++ development system for Windows, version 7.0 is the most in-depth solution for creating Windows-based applications. The included Microsoft Foundation Classes help you smoothly transition to the increased productivity of object-oriented programming while you generate the fastest, smallest code available from a PC-based C/C++ compiler. Features include: Microsoft Foundation Classes: a set of reusable object classes that efficiently abstract the Windows API, with additional classes for non-GUI-based applications. Advanced code generation and optimization: Reduce the size of applications with p-code technology, and boost application speed via complete function inlining. Advanced tools: all the components you need to create Windows applications are included. As well, an object aware browser lets you easily navigate through your project. List: \$495 Ours: \$309 FAXcetera #: 1269-0014 Return: L

Turbo C++

Borland International

Supports AT&T's C++ 2.0 specification. The first Turbo-charged native code compiler and also compiles your existing ANSI C code. New Programmer's Platform allows you to integrate the tools of your choice. Its user interface has multiple overlapping windows and mouse support. Take advantage of VROOMM, Virtual Runtime Object-Oriented Memory Manager, to write programs that break the 640K memory barrier. List: \$100 Ours: \$69 FAXcetera #: 1861-0001 Return: L

Zortech C++ 3.0

Symantec Corporation

Everything needed to develop compatible applications for MS DOS and Windows 3.0, OS/2 and DOS 386 in one box. Includes Windows development tools and MS Windows documentation, allowing developers to create Window applications without purchasing the MS Windows SDK. Introduces the 386 DOS Extender for development of applications up to 4 GB in size, royalty free. New 16-bit DOS Extender to produce multi-megabyte 16-bit applications for 286/386/486 machines. Royalty free. Also includes WINK, the library that converts DOS command line programs to true Windows applications at the flick of a compiler switch. Includes Zortech C++ tools, standard library code and more. List: \$449 Ours: \$337 Comp. upgrade List: \$199 Ours: \$189 FAXcetera #: 1953-0005 Return: N

BOOK SPECIAL!

Purchase Sam's Learning C++ with software to save time and \$\$. Zortech C++ compiler and examples included. \$39.95

Keep our number at your fingertips!



Zortech C++ Science & Engineering Edition 3.0

Symantec Corporation

Contains the full MS-DOS, MS Windows 3.0, OS/2, and DOS 386 capabilities of the Developer's Ed., plus additional powerful new features to simplify numerical computing. Zortech compilers are IEEE 748 floating point compliant and support NCEG numerical C extensions group, all fully explained by the extensive Zortech Numerics Guide. Includes the fully documented M++ Library, easy-to-use, complete and standardized multi-dimensional array classes for C++. Royalty free 386 DOS extender addresses up to 4 GB of memory, or the 16-bit DOS Extender for 286 PCs. List: \$995 Ours: \$693 FAXcetera #: 1953-0007 Return: F

GRAPHICS

Flash Graphics

FlashTek, Inc.

Flash Graphics is familiar to many programmers as it has been shipped with the Zortech compiler for several years. However, it now supports Borland, Microsoft, and several other C/C++ compilers. A special module (source code included) acts as an interface between applications written for BGI and Flash Graphics. Supplied are a debug library, which catches many error immediately, and a standard library for maximum speed and minimum code. Super VGA, TIGA, 16- and 32-bit DOS extender support. List: \$175 Ours: \$149 FAXcetera #: 1002-92012 Return: F

CALL TODAY!

Menuet III/C++

Autumn Hill Software

Menuet III/C++ is a complete redesign of the Menuet GUI Toolkit using C++. The C++ version uses aesthetics based upon Motif and is fully CUA compliant. It also features Pen extensions and is compatible with CIC's PenDOS operating environment. The product features a generic graphics API that interfaces with a wide variety of commercially available graphics packages. All standard GUI control constructs are supported, including spin-buttons, combo boxes, and the like. A built-in fonts module provides support for proportional spacing, character rotation, and multiple fonts per window. Many standard font formats are supported. The development system includes an Interface Editor, an Icon Editor, and a Font Editor. The PenDOS Extensions provide a custom control set for the PenDOS operating environment. List: \$375 Ours: CALL FAXcetera #: 2263-0007 Return: F

ObjectGraphics: C++

Symantec Corporation

A high-level, object-oriented graphics library that enhances the capabilities of the ObjectWindows class library. It provides a complete object-oriented solution to graphics programming under Microsoft Windows for Borland C++. ObjectGraphics shields the developer from the Windows GDI by providing in-depth support for graphics such as rectangles, polygons, curves, bitmaps, text with full style and font support, icons and more. ObjectDraw, a sophisticated drawing tool for creating graphics objects for graphical interfaces is included. List: \$195 Ours: \$140 FAXcetera #: 1663-0004 Return: L

RS-232++

NEW!

Greenleaf Comm++™ Asynchronous Comm Class Library

- ❑ C++ class library for DOS, Windows 3.x and OS/2.
- ❑ Device independence through inheritance.
- ❑ Supports Zortech, Microsoft 7.0, JPI and Borland C++.
- ❑ IBM PC, XT, AT, PS/2 and compatibles.
- ❑ COM1.COM8, and DigiBoard.
- ❑ Baud rates to 115,200.
- ❑ XON/XOFF, RTS/CTS flow controls.
- ❑ XMODEM, Kermit file transfer protocols.
- ❑ VT52, VT100 subset, ANSI & TTY terminal emulation.
- ❑ Hayes modem control classes.
- ❑ Line and link level controls & status.
- ❑ Extensive examples help you get started with OOP applications using communications.

- FREE Source Code
- FREE Unlimited Support
- No Royalties
- Money-Back Guarantee
- Top Rated Documentation



CALL (800)523-9830 NOW!

UNLEASH THE POWER OF C++ ARRAYS

New!!! M++ Version 4.0

M++ libraries provide a complete, multidimensional array language extension to C++.

M++ supports cross-platform application development on Borland, Microsoft, Symantec and many UNIX based C++ compilers.

M++'s high performance C++ classes and functions dramatically simplify array manipulation, slash development time, reduce maintenance costs, and improve reliability.

M++

- Allows arrays or sub-sets of arrays
- Reduces code size
- Allows up to 4 dimensional arrays
- Includes LINPACK and EISPACK
- Includes matrix, vector, symmetric matrix, and triangular matrix classes

New Version 4.0 features:

- Multi-dimensional FFTs and convolutions
- Huge memory pointer for Borland and Microsoft C++ compilers
- BitArray and PointerArray classes

OPTIONAL M++ MODULES

- **SUM**—Statistical Utilities Module
- **LSM**—Least Squares Module
- **OPTIM**—Optimization Module
- **TEST**—Test Module
- **QUAD**—Numerical Integration Module
- **ODE**—Ordinary Differential Equations Module

dyad
software

515 116th Avenue NE
Suite 120
Bellevue, WA 98004
(800) 366-1573
(206) 637-9428 FAX

LIBRARIES/UTILITIES

DataTable Spreadsheet Control 1.1 ProtoView Development Co.

NEW! Create sizzling database applications with ProtoView's DataTable. A sophisticated Windows spreadsheet control that will give your application the look and feel of Excel. It makes the perfect interface for any database. With its output picture clause masking, you can edit and format data right in the cell as you type it! /works with any standard dialog editor for interactive setup. Supports all C/C++ Windows compilers and PASCAL.

List: \$249 Ours: \$235
List: \$495 Ours: \$455
FAXcetera #: 2553-0003 Return: O
Full 30 day; sale final if includes source.

DynamicObject C/C++ 1.2 GUI Computer Inc.

DynamicObject C/C++ is a framework that implements a programmable toolbox to make your app resemble an Excel toolbox, Lotus 1-2-3 Palette or Borland Resource Workshop Tools. DynamicObject supports object manipulation on the layout screen including: create objects, size objects and move object; cut, paste, and clear objects under MS Windows. Example of DynamicObject C/C++ defaults with four different objects: rectangle, round-rect, circle and bitmap. Supports C++ compilers from Microsoft, Borland and Zortech.

C++ source List: \$99 Ours: \$90
FAXcetera #: 3107-0004 Return: L

Greenleaf Comm++ 1.0 Greenleaf Software, Inc.

A class library for interrupt driven asynchronous communications. Classes are provided for serial ports, modem controls, file transfers, and check values. There are classes that support the hardware dependent features which are derived from the base class. Service for up to 35 ports at baud rates to 115K baud in DOS. Supports Hayes Smartmodems™, XMODEM, KERMIT, XON/XOFF and VT52 and VT100 (subset) emulation. Support is included for MSDOS, Microsoft Windows, and OS/2 (Windows and OS/2 with the standard drivers).

List: \$199 Ours: \$169
FAXcetera #: 1035-0011 Return: L

Greenleaf Financial MathLib++™ 1.0 Greenleaf Software, Inc.

All the functionality of Financial MathLib™ 1.11 (see separate description) in a true C++ class library, supporting Zortech C++ and Borland Turbo C++. Overloaded math and logical operators provide a natural form of expression, while Declmal, Decimal/Array, Date Degree, Radian and other classes provide hundreds of member functions and operators to speed development of commercial and financial programs.

List: \$199 Ours: \$169
FAXcetera #: 1035-0012 Return: L

ImagingObjects 2.0 Quinn Communications

ImagingObjects is a C++ imaging toolkit enabling you to quickly write applications that enlarge, rotate, reduce, cut, copy, paste, remap, read/save in multiple formats, display, scroll, print, manipulate color, add, subtract, perform bitwise operations, sharpen, smooth, extract edges, (over 100 operations), using compact, medium, large, or huge memory models, and on any sized image. Version 2.0 has improved memory management allowing treatment of 1,2,4, and 8 bit per pixel images without regard to their origin. Version 2.0 also gives you Windows capability.

List: \$349 Ours: \$314
FAXcetera #: 3668-0001 Return: L

Linpack.h++ 1.1 Rogue Wave Software

A complete implementation of Linpack's famous functionality and more in an advanced C++ class interface. LU factorization for all Matrix.h++ types. Cholesky, QR, and Singular Value decompositions. Cholesky and QR least squares classes and Incremental least squares classes (using Cholesky decompositions) allow even over- and under-determined problems to be solved quickly and easily. Tridiagonal and triangular matrix solvers. Condition numbers and determinants fully supported. Built on top of Math.h++'s inlined assembly BLAs makes Linpack.h++ fast. Includes Matrix.h++ and Math.h++

List: \$299 Ours: \$269
FAXcetera #: 2861-0003 Return: L

M++ Array (DOS and OS/2) Dyad Software

An array language extension to C++ designed to simplify array operations and decrease coding time for up to four dimensional arrays. Designed for the programmer not needing the LINPACK and EISPACK numerical functions included in M++ Scientific. Includes common matrix operations, linear equation solutions, and regression solutions, and complete outer operations. All data types from char and unsigned char through complex.

List: \$119 Ours: \$101
FAXcetera #: 2131-0007 Return: L

M++ LSM (DOS and OS/2) Dyad Software

The least Squares Module computes estimates and statistics for linear and non-linear models with vector or matrix weighting and multiple dependent variables. Computed statistics include residuals, predicted values, covariance matrices, and R-squared statistics. Most common non-linear fitting algorithms are provided. (Requires M++ Scientific).

List: \$135 Ours: \$119
FAXcetera #: 2131-0003 Return: L

M++ ODE Module Dyad Software

M++ ODE provides a tool for numerical solutions to Ordinary differential Equations with boundary value constraints for both stiff and non-stiff problems. ODE provides both fixed step methods, which are preferable when the user knows an approximate step length, and adaptive step methods based on local error estimates which keep the solution within a user prescribed tolerance. (Requires M++ Scientific).

List: \$195 Ours: \$175
FAXcetera #: 2131-0009 Return: L

For the latest
in software news...

Industry
Currents

on pages 11 & 12.

DOS DEVELOPMENT SOFTWARE

M++ Quad (DOS and OS/2)

Dyad Software

The Quad module provides an interface to one- and two-dimensional numerical integration problems using algorithms based upon the well known QUADPACK package. Allows functional limits in two-dimensional integrals. Gives complete control over the numerous adaptive and non-adaptive quadrature rules. (Requires M++ Scientific).

List: \$195 Ours: \$179
FAXcetera #: 2131-0008 Return: L

M++ Scientific 3.0 (DOS and OS/2)

Dyad Software

Provides all the array handling capabilities of M++ Array plus Spectral functions, and the functionality of LINPACK and EISPACK. Includes QR, LU, DPF, SVD, Cholesky decomposition and eigensystem analysis. Extensive set of methods for all data types including linear equation solutions, matrix factorization and generalized inversions. Symmetric and triangular matrix operations. Complete outer operations. Huge pointers support large arrays for Borland and Microsoft.

List: \$295 Ours: \$265
w/source: List: \$495 Ours: \$449
FAXcetera #: 2131-0001 Return: L

M++ SUM (DOS and OS/2)

Dyad Software

The Statistical Utilities Module contains scalar and array functions needed in statistics. Distribution functions include t, F, Normal, chi-squared, gamma and beta. Methods are provided for computing means, standard deviations, covariance/correlation matrices, and simple random sampling (with and without replacement).

List: \$195 Ours: \$179
FAXcetera #: 2131-0005 Return: L

M++ Test

Dyad Software

Provides methods for testing numeric software using M++ arrays. Includes a complete set of test programs for checking the proper operation of M++. Checksum tests, tests for equality, and assertion tests are provided. Test programs distributed with other M++ modules also require M++ Test. (Requires M++ Scientific).

List: \$249 Ours: \$219
FAXcetera #: 2131-0006 Return: L

Math.h++ 4.1

Rogue Wave Software

Math.h++ combines power and ease of use in a set of C++ classes designed to improve the performance and reliability of your numerics code. Its innovative class structure makes the manipulation of vectors and matrices as easy as built in types like double, yet its inlined assembly BLAs makes your code faster than C or Fortran! Extensive classes for FFTs, linear algebra (via LU factorization), random numbers, statistics, linear regression, vectors and general matrices. Slices and picks fully supported. All objects have full persistence ability. Fully integrated with Tools.h++, providing the complete C++ solution. Extensive documentation.

List: \$ 99 Ours: \$ 75
w/source: List: \$299 Ours: \$269
FAXcetera #: 2861-0001 Return: L

Matrix.h++ 1.1

Rogue Wave Software

Matrix.h++ extends Math.h++ to new matrix types. Banded, Hermitian, Hermitian banded, Tridiagonal, Lower triangular and Upper triangular matrices are all fully supported. Innovative uses of static type checking insure that symmetries in your matrix types are fully maintained without giving up runtime efficiency. Includes Math.h++.

List: \$399 Ours: \$359
FAXcetera #: 2861-0004 Return: L

MouseWrapper.h++

Rogue Wave Software

The partner to View.h++, supplying the Model and View components of a Model-View-Controller architecture. Includes an extensive variety of graphics primitives such as Circles, Polygons, Rectangles, etc. All objects are fully persistent, using Tools.h++'s powerful store/retrieve architecture. Includes Rogue Wave's "Presentation System" for managing object picks, drags, rubber banding, etc.

List: \$495 Ours: \$446
FAXcetera #: 2861-0005 Return: L

POET

BKS Software

POET is the only pure Object Oriented Database management system running on DOS, Windows, UNIX and the NeXT machine starting at \$399. Your object databases have a unique identity that supports the full inheritance and encapsulation of C++. POET applications can handle complex real world models. The database model maps directly to its storage. POET supports schema evolution so extending and maintaining versions of your schema definitions is easy to do. POET's type manager supports all the C++ types as well as date, time and string, or create your own reusable customized types. POET's graphical browser allows you to use and navigate, analyze and modify the structure of your database schemas. Sophisticated indexing and optimized querying can quickly find any instance. Specify compiler and operating system.

DOS: List: \$399 Ours: \$359
Windows: List: \$499 Ours: \$469
FAXcetera #: 1000-6001 Return: L

Spontaneous Assembly for C/C++ 2.1

Base Two Development

This package is the fastest, easiest way to optimize and enhance your C/C++ program in assembly...without coding in assembly. It includes Spontaneous Assembly 2.1 (see separate listing), plus a compact, ready-to-use interface to every applicable function and macro, a 64-bit integer math class, header files, full source code, and over 1,500 pages of documentation packed with examples in C and in-line assembly. Ideal for optimizing "too big" or "too small" programs, or for taking advantage of Spontaneous Assembly's powerful facilities for TSR's, windowing, multi-tasking, environments, data compression, extended-precision integer math, string manipulation, etc. Full source code included. No royalties.

List: \$279 Ours: CALL
FAXcetera #: 2614-0002 Return: F

QualBase 2.0

Qualware

Powerful collection of C++ class libraries—persistence, multitasking, interrupts, arrays, strings, registers, stacks, binary trees, bit vectors, queue, conversions, hash tables, graphs, list classes, and more. Includes QOOPSM, Qualware's extendable persistent store manager, simple array execution for maximum speed, bounded array for quick debugging and linked list modes for prototyping. Features ultra-fine granularity to enable customized classes. QualBase comes with complete documentation and source code.

List: \$190 Ours: \$170
FAXcetera #: 1004-5701 Return: F

Style 1.0

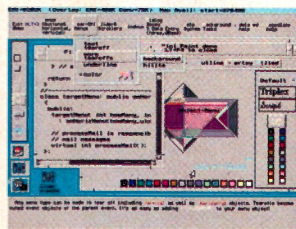
Software Ingenuities, Inc.

Style is a general purpose class library that provides high-level object management for C++. There is no other tool like it. With Style, the implementation of associations and links among objects becomes transparent. By removing many of the trivial details of C++ programming, Style helps you develop your application in a fraction of the time. Powerful traversal functions can navigate through a database of objects and perform operations on these objects. You specify what types of objects to target; the traversal function performs the legwork. Whether your application is simple or complex, Style will save you time.

List: \$250 Ours: \$199
FAXcetera #: 1000-6101 Return: F

FOR RETURN POLICIES
TURN TO PAGE 75.

object-Menu™ for C++



object-Menu Supports
Metaware C++ 32 bit
Borland C++
Microsoft C++ 7.0
MetaWindow • HALO
Genus GX graphics
BGI • MS graphics

object-Menu is a true class library to enable a remarkable GUI environment to be uniquely integrated into your DOS application. Our powerful, compact notation makes this the easiest GUI to develop and maintain. Includes windows, icons, unlimited menu types, scroll bars, spin control, combo boxes, tool bars, data entry, hypertext help system, message system, event manager & more. Comprehensive documentation and 100 examples.

Coming Soon!
Microsoft Windows Version

Introducing: object-Menu Jr.

object-Menu Jr. is the perfect "starter kit" to get acquainted with object oriented GUI programming. object-Menu Jr. includes menus, buttons, popups, dialogs, event management and more. All for just \$129. Competitive upgrade \$99.

No Royalties
No Risk 30 day Guarantee
Free Demo Available

object-Menu Jr. \$129
object-Menu \$369
object-Menu with source \$898

Mastercard and VISA accepted.

C and Pascal Users: Ask about graphics-Menu.



7 Mountain Rd,
Burlington MA 01803
(617)273-0421
Fax (617)270-4437
BBS (617)270-9552

DOS DESCRIPTIONS

**WE ACCEPT
MAJOR CREDIT
CARDS !**

Corporate Accounts...

Call (800) 422-6507



Tools.h++ 4.0

Rogue Wave Software

A set of efficient and versatile C++ foundation classes that will make virtually any programming job easier. Includes a complete set of collection classes, modeled after the Smalltalk-80 environment: Set, Bag, Ordered Collection, Sorted Collection, Dictionary, Stack, Queue and more. Plus, String (with powerful expressive abilities), Date, Time, Regular expressions, Tokenizers classes. B-Tree disk retrieval, files space manager (allocates, de-allocates and coalesces free space). Classes have not been derived from a single object, making it easy to use Tools.h++ with other libraries. Can be compiled as a Windows DLL. All classes support isomorphic persistence, making it possible to restore a complex collection even on a different operating system, or through Windows DDE! All non-Windows classes are strictly portable between DOS and Unix!

List: \$ 99 Ours: \$ 89
w/source: List: \$299 Ours: \$269
FAXcetera #: 2861-0002 Return: L

See page one for special bundle offer with BORLAND C++.

SCREENS/WINDOWS

C++/Views 2.0

Liant Software Corporation

C++/Views is a portable class library for creating high quality platform independent GUI applications for Windows. It comes complete with over 100 GUI and foundation classes for rapid application development. These classes compose a library of parts including windows, views, menus, dialogs, controls, bitmaps, printer, graphics, object classes, and persistent object storage. Also includes C++/Browse, a powerful C++ object class browser as well as source code at no additional charge.

List: \$495 Ours: \$421
FAXcetera #: 1812-0001 Return: F

object-Menu 1.0

ISLAND SYSTEMS

OOP library for quick integration of a C++ GUI. Combine menus, icons, windows, buttons, data entry, dialogue boxes, tear-off menus, scroll bars, etc. Event manager. Window manager. Hypertext help system with librarian. OSF/Motif styling, bevels, shadows, ridges. Powerful, compact notation. 450 page manual plus 100 examples. Supports: (compilers) Borland C++, Microsoft C/C++ 7.0, Metaware C++; (graphics) BGI, Microsoft graphics, Metawindow, Genus GX graphics, Halo graphics.

List: \$369 Ours: \$325
with source: List: \$898 Ours: \$763
FAXcetera #: 2088-0003 Return: L

object-Menu Jr. 1.0

ISLAND SYSTEMS

Creates a graphics user interface environment for DOS applications. Many menu types including horizontal, vertical, pop-up, checked, scrolled, buttons, icons. Dialog boxes, line editor, file chooser, event manager, icon librarian and more. Configurable look and feel. Built-in OSF/Motif and Windows styling. True class library is fully extensible. Powerful compact notation. Great for the C++ beginner. Complete documentation and loads of examples. Supported compilers: Borland C++, Microsoft C/C++ 7.0. Supported Graphics Libs: BGI, Microsoft graphics.

List: \$129 Ours: \$109
FAXcetera #: 2088-0004 Return: F

ProtoView Screen Management Facility 3.3

ProtoView Development Co.

ProtoView is a comprehensive set of design tools, data entry controls and libraries that lets you quickly and easily create a use-friendly interface with data validation for your Windows applications. ProtoView contains 4 components. To begin with, ProtoView has a custom control DLL with built-in data validation, DDE links and message handling. Secondly, ProtoView has a very sophisticated screen painter that can be used not only design your Windows, but to apply data validation, DDE links, and to perform actions on fields and then save them to a standard resource file (which will carry over into ProtoGen's test mode and then into your executable). ProtoView also has a second DLL that contains high level functions for printing files and buffers under Windows, file browsers, editors, and more. The last component of the ProtoView tool kit is a PVDial class, so that you can encapsulate the extended functionality of the 2 DLL's within the ObjectWindows library of Microsoft Foundation Classes hierarchy. Supports all C/C++ compilers for Windows.

List: \$395 Ours: \$355
FAXcetera #: 2553-0004 Return: F

QuickWindows Advanced for C/C++ 2.5

Software Interphase, Inc.

QuickWindows Advanced for C/C++ includes all the functions of its BASIC Counterpart. In addition, the library has built-in dynamic memory allocation. QuickWindows Advanced for C/C++ is written entirely in assembly language, uses less than 40K of memory (even for graphics mode pulldown menus with a complex SAA dialog system) and does not require any graphics libraries. Supports Borland Turbo C/C++ and Microsoft C/QuickC. 3.5" diskettes are available to registered users. Limited 30 day guarantee. 3.0 pounds.

List: \$149 Ours: \$134
w/source: List: \$349 Ours: \$314
FAXcetera #: 1767-0006 Return: F

View.h++

Rogue Wave Software

View.h++ is a complete C++ class interface to OSF/Motif, the standard in Unix GUIs. Controller component of a Model-View-Controller architecture, offering 100% Motif functionality - nothing has been left out. Includes an interactive browser that displays and instantiates the View.h++ classes. Extensive documentation includes an exhaustive tutorial on how the browser was written. Includes a copy of Rogue Wave's Tools.h++.

List: \$795 Ours: \$599
FAXcetera #: 2861-0006 Return: L

zApp for DOS and Windows 2.0

Inmark Development Corporation

zApp for DOS consists of a library of over 130 C++ classes that simplify the creation of DOS text mode applications with a Window-like GUI. zApp for DOS provides the event driven model, windows, menus, controls, dialog boxes, mouse support, transparent MDI support, flexible message handling, forms, automatic background tasking, and many other features expected in a modern system, all in DOS text mode. Gives you single source code compatibility with MS Windows, OS/2 PM and UNIX X/MOTIF. Comes bundled with zApp for Windows with source.

List: \$495 Ours: \$446
FAXcetera #: 1000-6401 Return: F

Zinc Interface Library 3.0

Zinc Software Incorporated

Lets you develop powerful object-oriented applications for Windows 3.0, DOS Graphics and DOS Text with one set of source code. Zinc Designer (included) uses platform-independent persistent objects to let you interactively design and save your application screens. Powerful event and window managers seamlessly integrate keyboard and mouse input with one line of code.

List: \$400 Ours: \$360
w/source: List: \$500 Ours: \$450
FAXcetera #: 2807-0001 Return: L

CASE TOOLS

Analysis Manager

Evergreen Case Tools, Inc.

The Analysis Manager is included with EasyCASE Professional and with the EasyCASE Plus Developer's Edition, and is available separately for EasyCASE Plus 3.1. Adds analysis capabilities to the product. Provides for level balancing of pairs of related data flow diagrams (DFDs), including real-time extensions. Checks for the correct carry down of processes, flows, and stores from one level to the next of linked diagrams. Checks for the correct extraction of stored data and the correct usage of terminated and interface flows. Level balancing also verifies that control transforms on real-time DFDs are correctly defined by linked state transition diagrams (STDs) making sure that input and output control flows on the DFD appear as condition and actions on the STD. Also performs checking of all chart types. Prints reports to any supported printer, to a file, or to the screen. In addition, error codes are fed back to the chart using the EasyCASE Plus chart editor.

List: \$195 Ours: \$176
FAXcetera #: 2741-0002 Return: L

EasyCASE Plus 3.1

Evergreen Case Tools, Inc.

EasyCASE Plus 3.1 is an easy-to-use, easy-to-learn, full featured CASE tool. Its IBM SAA/CUA compliant color graphic user interface (GUI) supports a mouse and provides pulldown menus, shortcut keys, dialog boxes, icons and scroll bars. A 'click and drag' approach is used for the selection and manipulation of chart objects. Diagram types available include: Data Flow Diagrams (including real-time extensions), State Transition Diagrams, Structure Charts, Data Model Diagrams, Entity Relationship Diagrams, Entity Life History, and Logical Data Structure. Methodologies supported include: Yourdan/DeMarco, Gane & Sarson, SSADM (3.0 & 4.0), Yourdan/Constantine, Jackson, Ward-Mellor, Hatley, Chen, Bachman and Martin.

List: \$495 Ours: \$445
FAXcetera #: 2741-0001 Return: L

EasyCASE Plus Developer's Edition 3.1

Evergreen Case Tools, Inc.

Includes EasyCASE Plus 3.1 (see separate description), the Analysis Manager (see separate description) and the Schema Generator. The Schema Generator extends EasyCASE Plus to include the capability to automatically generate dBASE III table headers or DDL (Data and the data dictionary). The Schema Generator provides pick lists that provide only allowable data types and constraints for the selected target database. Several SQL options are also supported, including drop database, table and index statements; start database and create index statements; the ability to specify a primary or foreign key, and the ability to force upper and lower case field types, names, and commands. Supported database formats include dBASE II plus and dBASE IV, which can be accessed from dBASE-compatible (xBASE) products, such as Paradox, Clipper, R:BASE, FoxPro, etc.. SQL dialects supported include ANSI, SQL, dBASE IV, SQL Server, SQLBase, ORACLE, Sybase, Ingres, Informix, OS/2 Extended Edition, DB2, and Rdb/VMS.

List: \$795 Ours: \$715
FAXcetera #: 2741-0003 Return: L

EasyCASE Professional Pack 3.1

Evergreen Case Tools, Inc.

Includes both EasyCASE Plus version 3.1 and the Analysis Manager. The integrated Analysis Manager extends the EasyCASE Plus to include Data Flow Diagram level balancing (including real time extensions) and diagram rule checking. Level balancing checks that processes, flows and stores on linked DFDs have been correctly used and carried down from upper to lower levels. Level balancing also balances down from control transforms on real-time DFDs into state transition diagrams. This product also identifies diagram objects used inappropriately (for example, incorrectly connected to other objects on the chart), object usage which violates methodology or chart specific rules, and those not entered correctly in the data dictionary. It also checks for correct definition of composite data structures (records) and elements. Error indications are fed back to the chart to provide visual representation of objects in error.

List: \$649 Ours: \$539
FAXcetera #: 2741-0001 Return: L

Look for

Programmer's Paradise®

at COMDEX
Booth #H7442



CALL TODAY!

What else would you expect from the leading developer of C++ libraries?...

We take advantage of the **fastest** implementation of templates in Borland® and MetaWare® compilers.

At Rogue Wave we are committed to allowing our users to tap all of the power that C++ offers. For today's compilers that means templates. **Tools.h++**, our best selling industry standard C++ library, now includes Templates! Whether you use template classes or non-templates classes, **Tools.h++** is the ideal solution!

Tools.h++

Tools.h++ is a complete toolbox of over 97 C++ classes. It is a set of efficient and versatile C++ foundation classes that will make virtually any programming job easier.

- Time and Date handling and manipulation classes.
- String and Character manipulation classes.
- Singly and Doubly linked lists, Stacks, Queues and Vectors classes.
- Smalltalk™-like Collection classes: Set, Bag, SortedCollection, OrderedCollection, Dictionary, Stack Queue, etc.
- Regular Expression Class for search and replace.
- Tokenizer Class for easy string parsing.
- File Class to handle file manipulation with read, write, seek, erase, etc.
- B-tree Class to handle efficient keyed access of disk records.
- File Space Manager Class to allocate, deallocate and coalesce space within files.
- Virtual and Buffered Page Heap to manage objects bigger than 64k.
- Other classes include: Bit vectors, Virtual I/O streams, Cache managers, Error handling and many more!
- All objects fully persistent



Templates!

Rogue Wave's Tools.h++ is an "industrial strength" library that has been used in many commercial applications, small and large. All classes have not been derived from a single root object, so they can be easily integrated with other class libraries. All classes have a Persistent Store facility that allows complex objects to be stored and retrieved on heterogeneous networks or the Windows 3.0's Dynamic Data Exchange or clipboard facility. The classes are bulletproof, optimized for speed, and well tested. Tools.h++ is an excellent example of how to write true C++ code correctly. Source Code is included. All non-Windows classes are strictly portable between DOS and UNIX.

Math.h++

Math.h++ is a complete set of extremely fast C++ classes to handle all of your statistic, linear regression, FFTs, random numbers, vector and matrix needs. Runs on both DOS and UNIX.

Linpack.h++

Linpack.h++ revolutionizes numerics by allowing you to manipulate whole objects rather than low level "do loops", giving you all of the speed of Fortran and none of the headaches. Runs on both DOS and UNIX.

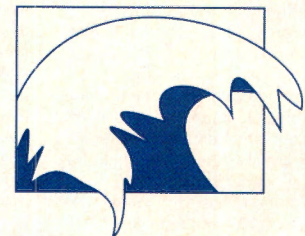
View.h++

View.h++ is a powerful and efficient C++ library that encapsulates 100% of the functionality of the industry standard OSF/Motif. Runs on UNIX.

CALL FOR MORE INFORMATION

1-800-487-3217

**TO ORDER, CALL
1-800-445-7899**



**ROGUE
WAVE
SOFTWARE**

DOS DEVELOPMENT SOFTWARE

POSE

Computer Systems Advisers, Inc.
POSE (Picture Oriented Software Engineering), a comprehensive CASE Tool offering complete application development support to the systems analyst developing distributed applications. POSE addresses complete System Development Life Cycle phases including: Planning, Analysis, Design and Implementation. As one of the leading PC based CASE Tools, POSE offers a modular approach to using CASE technology, and contains a graphical user interface consistent across all modules offering greater ease of use and learning. Together, these tools form the basis of a complete systems design workbench, improving the ultimate quality and consistency of information systems through multiple stages of requirements checking and design specification matching for consistency, correctness and completeness of the resulting application.
FAXcetera #: 3577-0001 Return: N

POSE is offered as follows:

I. POSE Complete 10-Module Workstation-

Includes Data and Process Modeling Toolkits, Screen Report Prototyper and Planning Matrix Diagrammer. Provides complete tools to capture, validate and integrate system information requirements. Creates documentation and generates database schema for (select one): DB2, SQL/DS, Oracle, Focus, AS/400 or ADABAS.
List: \$2995 Ours: \$2696

II. POSE Data Model Toolkit-

Provides powerful and complete data modeling including entity relationship analysis, third normal form normalization, transaction analysis and database schema generation for (select one): DB2, SQL/DS, Oracle, Focus AS/400 or ADABAS. Reverse schema engineering feature allows data model generation from existing applications.
List: \$1195 Ours: \$1076

III. POSE Process Model Toolkit-

Supports creation and analysis of dataflow diagrams, structure charts, decomposition and action chart diagrams. Offers full integration with POSE data models.
List: \$1195 Ours: \$1076
FAXcetera #: 3577-0001 Return: L

Schema Generator 3.1 Evergreen Case Tools, Inc.

The Schema Generator is included with the EasyCASE plus Developer's Edition and is available separately for use with EasyCASE Plus and EasyCASE Professional 3.1. It extends EasyCASE Plus to include the capability to automatically generate dBASE III Plus Table headers, or DDL (Data Definition Language) scripts for a wide variety of SQL dialects directly from Entity Relationship Diagrams (ERDs) and the data dictionary. The Schema Generator provides pick lists that provide only allowable data types and constraints for the selected target database. Several SQL options are also supported, including drop database, table and index statements; start database and create index statements; the ability to specify a primary or foreign key; and the ability to force upper or lower case field types, names, and commands.
List: \$195 Ours: \$176
FAXcetera #: 2741-0005 Return: L

COBOL LANGUAGE

COMPILERS

Micro Focus Professional COBOL Micro Focus

Designed to aid building industrial strength applications on a PC platform. Includes COBOL compiler, the animator source code debugger, an integrated development environment, a screen printer, a COBOL tailored program and text editor, an extended memory manager, an advanced Run Time environment and an on-line help and reference facility. Also included are standalone and network file handlers, embedded SQL support, Microsoft Windows and OS/2 Presentation manager interfaces, a set of portable graphical user interface (GUI) programming routines, a directory list and search facility, a series of application packaging aids, a report design and generation utility and a cross-language reference tool. Professional COBOL runs under either DOS, Microsoft Windows or OS/2 and can make full use of the OS/2 High Performance File System. The compiler supports the ANSI '74, ANSI '85, RM COBOL, DG COBOL, IBM OS/VS COBOL, IBM DOS/VS COBOL, and IBM VS COBOL II dialects and conforms to IBM SAA standards.
List: \$1250 Ours: \$1125
FAXcetera #: 1718-0001 Return: L

Micro Focus Personal COBOL 1.1 Micro Focus

Micro Focus Personal COBOL is a fully integrated program development system for IBM PC's and compatibles. Included are a full-screen text editor, a source code generator for screens and forms, a syntax checker, automatic file handling and an interactive source-code-level debugging and maintenance facility. Personal COBOL is an ideal package for the student learning COBOL programming.
List: \$149 Ours: \$134
FAXcetera #: 1718-0002 Return: L

Microsoft COBOL Professional Development System 4.5 Microsoft Corporation

Provides the most productive development environment ever offered to COBOL programmers. Now includes the Programmer's WorkBench (PWB) integrated development environment, bringing together all the tools needed to edit, build, compile, debug, and browse DOS and OS/2 applications. Integrated utilities speed up the development process by using pulldown menus and dialog boxes to set compiler options, and a complete on-line help system offers information about the COBOL languages, the development systems and all error messages. Both CodeView and the ANIMATOR debuggers are offered, and the new Source Browser provides a virtual road map to your program. The compiler has been improved with a new runtime systems extension that allows complete SQL and Presentation Manager programming in COBOL. In one complete development system, Microsoft COBOL supplies programmers with all the tools needed for business applications development.
List: \$1250 Ours: \$881
FAXcetera #: 1269-0013 Return: L

Realia COBOL 4.00 Realia, Inc.

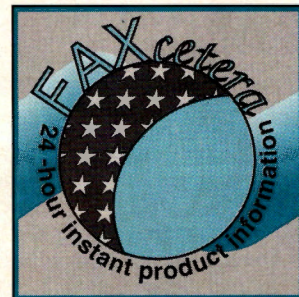
Compiles, tests, executes IBM VS COBOL and VS COBOL II programs, without change, under OS/2 or DOS (including Presentation Manager) in up to 16MB RAM. Supports: IBM VS COBOL II, OS/VS COBOL, ANS or SAA COBOL; ANSI-85 or ANSI-74; SCREEN SECTION, EBCDIC, transactional file locking; networks; C, Pascal assembler subroutines. Includes interactive source-level debugger, linker.
List: \$995 Ours: \$896
FAXcetera #: 1483-0004 Return: L

RM/COBOL Developer Pack 5.2 Liant Software Corporation

Includes the RM/COBOL-85 Development System in addition to RM/CO*, an integrated application development environment that automates the edit/compile/debug development cycle. RM/COBOL is a modern COBOL compiler/runtime system conforming to both ANSI COBOL 1974 and 1985 standards. RM/CO* creates a menu-driven, windowed environment that keeps the operating system in the background to allow the programmer to remain focused on the application itself. RM/COBOL has object, data file, and source portability.
List: CALL Ours: CALL
FAXcetera #: 1952-0015 Return: F

RM/COBOL Developer Pack + 5.2 Liant Software Corporation

Provides a complete set of development tools to COBOL programmers with the addition of RM/Companion and RM/Panels to the RM/Developer Pack. RM/Companion is a report writer which allows total access to COBOL data files and offers the option of generating reports in either compiled or interpretive mode. RM/Panels is a screen management and forms designer system for developing user interfaces. RM/Panels expedites rapid prototyping of screens and applications and reduces coding to support other applications.
List: CALL Ours: CALL
FAXcetera #: 1952-0019 Return: F



**FOR INFORMATION
ON HOW TO USE
FAXcetera®
TURN TO PAGE 176.**

Dealers meet...

LIFEBOAT DISTRIBUTION SERVICES

Lifeboat Distribution Services provides a wide variety of development, science engineering and otherwise hard-to-find software products to thousands of dealers servicing technical markets.

Lifeboat sells to thousands of dealers throughout the United States. Lifeboat International also supports an extensive international dealer network.

France (800) 847-7078
Denmark (908) 389-8950
Italy
Spain
Switzerland
Japan
USA
England
West Germany
South Korea
Canada
The Netherlands

**For return policies
turn to page 75.**

DATABASE

CLIPPER LIBRARIES

CALC (DB) 1.1

Pinnacle Publishing, Inc.

Extends Clipper 5.0 dialect to include spreadsheet and calculation capabilities.

List: \$299 Ours: \$269

FAXcetera #: 1794-0019

Return: O

Full 60 day guarantee.

Casual.lib 1.0

Extrasensory Software

Send faxes from within Clipper programs to any number of phone numbers at any desired time. Track when sent and phone time used: User works on while processing is done in background. Set page size, font size and resolution for each fax. User needs fax card supporting DCA/Intel CAS interface, like Intel SatisFAXtion.

List: \$100 Ours: \$90

FAXcetera #: 1000-5602

Return: F

ClipWord/SpellClip 2.0

Action Plus Software

The purpose of this program is to provide Clipper programmers with an easy-to-integrate, powerful word processor for their Clipper applications. ClipWord/SpellClip contains functions to Add, Edit, Print, Import, Export, and Save documents. Within these documents **BOLD**, **UNDERLINE**, Spell Checking, Block operations, Field Merging, and Margin settings are supported. Spell Checking is also provided through the SpellClip procedure.

List: \$200 Ours: \$180

FAXcetera #: 3254-0001

Return: N

Dynamic Data Dictionary for CA-Clipper

Market Service Associates

The Dynamic Data Dictionary module provides an API to the Lamaura Data Dictionary for Clipper 5.01 developers. Virtual fields, index definitions and orders, relations, validation and picture clauses and other standard definitions stored in the Lamaura Data Dictionary may be accessed by any Clipper 5.01 application which links in the Dynamic Data Dictionary. Supplied as a library and .CH files, this module and the Lamaura Data Dictionary provide a means of ensuring adherence to individual or corporate database standards. A second major feature is a complete network-independent transaction processing system for Clipper 5.01. Full transaction processing, journaling and rollback features are included in the form of commands and functions which are used within your application. Whether you are developing a standalone machine or on any network, you can provide powerful, secure TP features.

single-user List: \$100 Ours: \$90

five-user List: \$125 Ours: \$113

FAXcetera #: 3254-0001

Return: N

ESCAPE 2.05

Pinnacle Publishing, Inc.

Laser printer library for Clipper Developers. Allows users to control HP lasers from within application written in Clipper. Supports soft and cartridge fonts.

List: \$149 Ours: \$135

FAXcetera #: 1794-0020

Return: O

Full 60 day guarantee.

FUNcky II DLESKO, Inc.

FUNcky II is an enhancement library for Clipper and C compilers including but not limited to Microsoft, Turbo C, Turbo C++, Borland C, Watcom and Zortech. Written in C and assembler, it continues to evolve into a language independent library. FUNcky is a 'core' library to which surface libraries are added. It has over 1000 functions, documentation with interactive example programs which can be compiled and 5+ megabytes of Norton Guides. (It contains a limited version of Expert Help). It is compatible with Clipper version from summer '87 on. This library allows you to create your own library.

List: \$495 Ours: \$445

FAXcetera #: 2160-0001

Return: L

GetIt 5.2

Pinnacle Publishing, Inc.

GetIt is an events library and Get system enhancer for Clipper summer 87/5.01. Clipper's only built in event trapping function is SET KEY. GetIt's asynchronous event trapping functions let you call user-defined procedures based on: time interval, keyboard inactivity, COM activity, mouse clicks, etc. Events can be nested, giving your programs complete modularity and event "scoping".

List: \$149 Ours: \$134

FAXcetera #: 1726-0003

Return: O

Full 60 day guarantee.

NantucketTM Tools II Nantucket

A comprehensive extension Library for Clipper 5.0. Configured and Optimized to support Professional developers, Nantucket Tools II opens to Clipper programmers a new domain of development solutions that previously required C and Assembler expertise. Already the most productive PC development system, Clipper 5.0 is rendered even more efficient and effective when used with Nantucket Tools II.

List: \$695 Ours: \$499

FAXcetera #: 5400-0002

Return: F

NetLib 5.2

Pinnacle Publishing, Inc.

A complete networking function library. It allows the Clipper programmer to do the common networking tasks facing every programmer in a multi-user environment. These functions include bindery access, directory rights information, user id, reading and setting drive mapping, semaphore locks, who-locked-this-record, login/logout, its, and print capturing. There is support for Novel networks, Banyan Vines networks, and Netbios networks (some of the functions listed above are network specific). This library also provides functions useful in non-networked environments, like scatter/gather, transparent dbf encryption, and access to read-only files.

List: \$299 Ours: \$269

for FoxPro List: \$299 Ours: \$269

FAXcetera #: 1726-0004

Return: O

Full 60 day guarantee.

PostScript Library for Clipper, The Version 1.8

Extrasensory Software

Allows you to easily print to a PostScript printer from within your Clipper applications. Print in any font, any size, any color, any orientation, anywhere. Create US Postal and 3-of-9 bar codes. Graphics: boxes, pie charts, circles and free-form shapes (bordered and/or filled with gray, stripes or grids); line, scatter, bar and polar graphs.

List: \$149 Ours: \$129

FAXcetera #: 1000-5603

Return: F

PS ERROR 1.2

Pinnacle Publishing, Inc.

PS ERROR is the only Error System available for Clipper that is able to record both Runtime and Fatal Errors to an Error Log file when they occur. Includes a user-friendly Runtime Error Handler with Source Code so you can customize it as needed. The Fatal Error Handler can be customized through Clipper function calls. PS ERROR also includes functions that provide you with the information about computer hardware (CPU, memory, video, file handles, etc.) and functions to monitor the Stack. Advance support for Local Error Handlers and Special Error Blocks.

List: \$149 Ours: \$150

FAXcetera #: 1794-0022

Return: O

Full 60 day guarantee.

SEZ YOU 1.0

Pinnacle Publishing, Inc.

SEZ YOU includes all the functionality of SEZ YOU, with the additional ability to store the SET CLIPPER= settings in text files, called Configuration Files, which can be edited by the end user. Network users will find SEZ YOU especially valuable because it can store different settings for every workstation on the network, then detect which station is running and use the proper settings. This way you can optimize the VMM system for each workstation (some may have local hard drives, EMS memory, RAM disk, etc.).

List: \$149 Ours: \$134

FAXcetera #: 1794-0026

Return: O

Full 60 day guarantee.

SOS Help! 1.25 for CA-Clipper

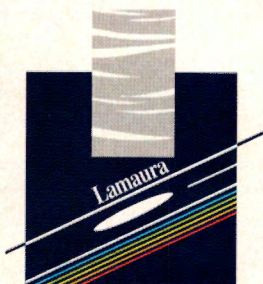
Market Service Associates

Using just one line of code, SOS Help! provides a quick and easy means of adding context sensitive help to an application. By linking in a library containing the Help Design System to any Summer '87 or Clipper 5.01 application, a developer or person doing the system documentation can pop up a screen using the F1 key in order to create a help object. Text is typed in as the end user will see it and screen attributes for the help window and shadow are completely customizable. Default help text and a default help object style may be defined for the entire system. When complete, a single binary file containing all help information may be generated. Alternatively, source code may be generated if the number of help screens is small. The application is then re-linked with a smaller version of the library. SOS Help! provides functions which allow context sensitive help for such tough situations as ACHOICE(), DBETIT(), and TBROWSE() (complete working examples provided).

List: \$125 Ours: \$113

FAXcetera #: 2697-0002

Return: L



Database Developers Tools

from

Lamaura Development Limited

SOS Help! for Clipper

Context sensitive help systems without coding.

Lamaura Data Dictionary

For dBASE, FoxBASE +, FoxPro and Clipper. Design, document, maintain databases. Includes workgroup features and security levels.

Dynamic Data Dictionary Module

For Clipper 5.x. Provides applications direct access to information in dictionary. Includes complete network independent transaction processing.

Lamaura Development Limited

PO Box 610, Coeur d'Alene, ID 83814

Voice: (208) 765-9439 Fax: (208) 667-2862

Product names are property of their respective owners and are used for identification purposes only. Lamaura and the Lamaura logo are trademarks of Lamaura Development Limited.

**SEE
SPECIAL
BUNDLE
OFFERS ON
PAGES 8 & 9
AND 19
OF
THIS ISSUE!**

Over **300** Powerful Functions **Clipper v5.01**

Vern Six's Clipper Toolbox contains the functions necessary to build professional looking applications in a fraction of the time it currently takes. Vern Six's Clipper Toolbox makes your applications much more powerful and appealing. Clipper experts and beginners alike will be able to integrate the functions in this toolbox into their applications within minutes of opening the package!

Vern Six's Clipper Toolbox is written entirely in Clipper v5.01 and is not merely 5.01 compatible, it has been written specifically for Clipper v5.01! This means this toolbox is extremely proficient and takes full advantage of new features found only in Clipper v5.01! You won't be dragging around all the baggage from Summer '87 libraries that merely "work" with Clipper v5.01.

Complete source code is included **FREE** of any additional charge. The source code can be easily be modified by you to suit your specific needs and it serves as a wonderful tutorial for someone wanting to learn clipper v5.01.

**VERN SIX'S
Clipper Toolbox provides...
Elegantly written functions
dealing with the 7 basic
areas of most applications!**

Vern Six's Screen Designer/Translator

Vern Six's Screen Designer/Translator (the Designer) will save you hours of time consuming design and coding, allowing you to design your user input/update screens in a very easy point-and-shoot interface. The designer provides the unique capability for your screens to be 100% language independent (translatable). It has the ability to display your screens in different languages all from the same code!

Clipboard™

Clipboard is a self-contained, fully functional, stand-alone electronic mail and bulletin board system. Clipboard requires only MS/PC-DOS v3.3 or higher and ANSI.SYS to operate and is designed to operate on a stand-alone computer. Also works with a wide variety of NetBIOS compatible Local area networks and can support an unlimited numbers of local and/or remote users. Clipboards Electronic Mail capabilities are numerous. Separate, secure message areas can be established to allow for electronic communications among and between various corporate departments.

- ◆ The Art of User Interface—windows, menus, validation routines, alert boxes, interactive queries, index progress functions and much more.
- ◆ Complete context sensitive help—can be added to ANY application with one function call! Help screens can be created/edited without the need to recompile or link your application.
- ◆ Improved date/time functions—numerous extensions to the Clipper date/time functions.
- ◆ Database/Networking functions—complete record/file locking, network semaphores, database browsing and maintenance functions, and much more.
- ◆ Complete Data Dictionary—ensure database/index integrity, produce *.CH files so when your data dictionary changes so will your *.PRG files!
- ◆ Printer Control—currently over 200 printers are supported and your user's can add printers "on-the-fly".
- ◆ Security/Data Encryption—force user's to "login" to your applications, encrypt data to protect it from unauthorized curious eyes!

**To Order Call
Programmer's Paradise
800-445-7899**

***FrontLine*
SOFTWARE**

ALSO AVAILABLE...

Vern Six's Clipper ToolBox 9.0 FrontLine Software

Vern Six's Clipper ToolBox is an easy to use set of functions for building professional applications in rapid turn around time. It is written in Clipper 5.01. Tools in the box allow you to build: user interface, context sensitive help, improved date/time dictionary, printer control, security/data encryption. Complete source code is included at no additional cost. The ToolBox provides over two hundred functions, which are critical to application development.

List: \$140 Ours: \$95
FAXcetera #: 1004-7603 Return: N

Visual Interface 1.1 Pinnacle Publishing, Inc.

The new class library that lets you design graphical user interfaces with movable windows and mouse driven menus in Clipper. Visual Interface gives you all the classic elements of graphical user interfaces.

List: \$299 Ours: \$269
FAXcetera #: 1794-0023 Return: O
Full 60 day guarantee.

ZipCode/Clip 2.0 Action Plus Software

ZipCode/Clip includes: database containing over 75,000 zip codes, with cities, states and counties. Database can be accessed from dBASE III+, dBASE IV, Clipper, FoxBase, FoxPro or other XBase applications. Clipper source code to perform Look-Ups from within your Clipper Applications (Summer '87 & 5.0) Zip Code database updates available regularly.

List: \$100 Ours: \$90
FAXcetera #: 3254-0002 Return: N

COMMUNICATIONS LIBRARIES

CommTools 1.0 Pinnacle Publishing, Inc.

Telecommunications programming library for dBASE, Clipper, FoxBase, FoxPro and QuickSilver. Supports file transfer protocols, terminal emulation and fax boards. Allows user to communicate with other systems in both terminal emulation mode and file transfer modes. Gives user broadest set of communications standard options available to dBASE programmers.

List: \$299 Ours: \$269
for FoxPro List: \$299 Ours: \$269
FAXcetera #: 1794-0026 Return: O
Full 60 day guarantee.

SilverClip SPCS Silverware

SilverClip SPCS brings reliable high-performance interrupt-driven control of asynchronous communications to Clipper applications. SilverClip SPCS comes with complete source code, making customization fast and easy. It allows simultaneous access to an unlimited number of Comm ports. Fully interrupt-driven to insure reliable data transfers. Incorporates a table-driven design for maximum flexibility. Supports a variety of async devices at up to 115K baud rate.

List: \$299 Ours: \$239
FAXcetera #: 1678-0006 Return: O
Unconditional money-back guarantee.

SilverClip Library SPCS SilverWare

Fully interrupt driven asynchronous communications for Clipper 5.0. Allows simultaneous access to an unlimited number of Comm ports. Baud rates to 115K, Background Timers, Terminal Emulation: ANSI, TTY, VT 100, VT 52. File Transfers: XMODEM, YMODEM (Batch), 1K-XMODEM-G, YMODEM-G (Batch) and ASCII. Interrupt 14 redirection for LANs, Flow control, Smartmodem support, high-level remote input. Includes complete source code. Royalty free.

List: \$299 Ours: \$259
FAXcetera #: 1678-0001 Return: L

Telepathy 1.11 Extrasensory Software

The finest serial communications library for Clipper. Supports Kermit; X, Y, Y-G and ZMODEM; & ASCII. Background communication, easy status display updates, direct use of serial devices like bar code wands. UDFs hook directly into file transfer protocols and terminal emulators (which include TTY, PC ANSI, VT102). Supports multiple port cards, comes with unmatched scripting primitives.

List: \$220 Ours: \$199
FAXcetera #: 1000-5601 Return: F

DBMS

ARAGO dBase 2.5 WordTech Systems, Inc.

ARAGO dBase is a fully dBASE IV compatible database management system with unmatched performance and ease of use. It is exceedingly fast and features an elegant CUA compliant user interface with extensive HELP facilities, a test coverage analyzer, a panel painter, and numerous other tools for both first-time users and advanced developers. ARAGO dBase is also compatible with dBASE III+ which will allow you to get started immediately running millions of existing applications!

List: \$699 Ours: \$595
FAXcetera #: 0539-0001 Return: F, N

ARAGO dBase/LAN 2.5 WordTech Systems, Inc.

ARAGO dBase/LAN offers the simplest solution for shared access to Xbase data. Users can instantly make the transition from single user to multi-user, because locking is automatic and you can read data even if someone else has write-locked it. ARAGO dBase/LAN also incorporates a new kind of optimization which greatly enhances its performance and allows it to run up to five times faster than dBase IV.

List: \$699 Ours: \$595
FAXcetera #: 0539-0006 Return: F, N

ARAGO Professional 2.5 WordTech Systems, Inc.

ARAGO Professional is the complete dBASE IV compatible development environment. ARAGO Professional is stunningly fast with a CUA interface. It includes both multi-versions of ARAGO dBase and ARAGO Quicksilver. You can easily create dBase programs and also generate .EXE files for unlimited distribution. (Requirements: DOS 3.1 or higher, IBM PC or better, hard disk, 640K RAM).

List: \$1199 Ours: \$945
FAXcetera #: 0539-0005 Return: F, N

YOU'VE GOT THE POWER TO DEVELOP THE FUTURE

The only package you'll ever
need regardless of platform
or operating system

- 1 Billion Records/File
- 64kb Record Length
- 999 Fields per Record
- 26 Indexes
16 system maintained
10 user maintained
- 32 Associated Fields
- Unlimited Files/
Applications
- Event Driven Processing
- Browse Windows with
Pop-Up Feature
- Fuzzy Search
(for inexact searches)
- 80 Plus Pre-Defined
Functions and Edits

filePro PLUS PROFESSIONAL APPLICATION DEVELOPMENT TOOL

It's the right combination of simplicity and sophistication, programming power and user ease, technical superiority and portability across the technologies of today and tomorrow.

CREATED BY THE SMALL COMPUTER COMPANY, INC.

Order now by calling (800) 445-7899



For the latest in software news
read Industry Currents
on pages 11 & 12.

DOS DEVELOPMENT SOFTWARE

Clarion Personal Developer 2.0 Clarion Software

Clarion's Personal Developer allows you to create and run your own customized programs in minutes—even if you have never touched a keyboard before. It gives you relational capabilities, functions, utilities, and a development environment. The programs and data files are upwardly compatible with the Professional Developer. And, it imports/exports dBASE, Lotus 1-2-3 and ASCII files.

List: \$79 Ours: \$69
FAXcetera #: 1862-0001 Return: L

Clarion Professional Developer 2.1 Clarion Software

A fully equipped development system for producing PC applications. Includes an applications generator for creating screens, windows, tables, menus and reports. Key features include: built-in LAN support, links to C and Assembler, and contains RTLink for generating overlaid .EXE programs to distribute with no royalty or runtime fees. Contains Report Writer, a powerful ad-hoc query utility. Speed, flexibility and ease-of-use, give the power to create much richer programs—in a fraction of the time.

List: \$845 Ours: \$459
FAXcetera #: 1862-0002 Return: L

Clarion Professional Developer 2.1 Competitive Upgrade Clarion Software

Upgrade now from your existing database product to Clarion Professional Developer version 2.1. Proof of ownership required; offer available while supplies last.

List: \$195 Ours: \$185
FAXcetera #: 1862-0002 Return: L

Clarion Software Distribution Kit 2.0 Clarion Software

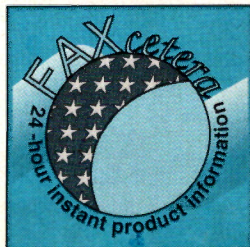
The Clarion Software Distribution Kit is a development tool that provides a customized installation process for applications that are to be distributed to end users. The kit is designed for use by any developer who distributes software or data, including in-house software teams and independent developers. Developers can create distribution diskettes through user-friendly, menu-driven interface. Any type of file can be compressed and stored on diskettes for distribution.

List: \$199 Ours: \$179
FAXcetera #: 1862-0005 Return: F

DataBoss 3.5

Kedwell Software, Inc.
Relational database application generator. Use to develop complete applications with menus, forms, browse tables, memo fields, reports and more. Includes sophisticated screen painter; field definition template for defining field characteristics, indexes, data files and their relations; WYSIWYG report designer; generator engine and skeletal files. Generates structured "C" or Pascal source code. No license or runtime fees.

List: \$695 Ours: CALL
FAXcetera #: 3758-0001 Return: F



dBASE IV 1.5 Borland International

Provides both first time and advanced users with the tools to develop and implement solutions to a wide range of PC data management needs. The dBASE IV language combines all the commands and functions of dBASE III PLUS, enhanced with over 315 new commands and functions including SQL. Also includes menu-driven Control Center, Design Tools, Automatic Code Generator, interactive windowed debugger, and integrated program editor. Runs on either single or multi-user systems.

List: \$795 Ours: \$589
FAXcetera #: 2660-0001 Return: N

Purchase Que's Using dBASE IV to save time and \$\$ Command chart functions Reference and SQL Coverage!
\$29.95

filePro Plus

The Small Computer Company, Inc.

A Menu driven Application Generator, 4GL and RDBMS. filePro Plus is an "all-in-one" programming environment with all the tools you need for creating high-quality, feature-rich applications. Some of the tools include a CUSTOM Menu Generator, Screen and Report Painter, built-in debugger, event driven processing, browse look-up windows, and the ability to create your own data types. Capabilities include unlimited files per application, 1 billion records per file, ability to import and export ASCII, delimited ASCII, Lotus, and Word Perfect files. With filePro Plus your applications can stand the test of time. You can create new or modify existing applications, as quickly and frequently as your application needs change. All applications created in filePro Plus are completely portable on over 200 hardware platforms, and over 12 operating systems including: MS-DOS, Networks, XENIX, UNIX, AIX, ULTRIX, VMS, and HP-UX. Runtimes available for distribution.

List: \$699 Ours: \$579
Lan 1-5 Users: List: \$1595 Ours: \$1359
FAXcetera #: 2254-0001 Return: F

FoxPro 2.0 Microsoft Corporation

Delivers the next generation in DOS relational database management systems. Intuitive, mouse-driven interface and powerful 4GL tools make data entry, reports, queries, and other tasks fast and easy. Patent-pending Rushmore™ query optimization performs queries faster than DB2 on a mainframe. Industry standard XBASE language allows easy migration of applications, while extensions allow development of object-oriented, event-driven applications.

List: \$795 Ours: \$549
FAXcetera #: 1506-0001 Return: O
60 day unconditional

Purchase Que's Using FoxPro 2 to save time and \$\$ Covers basic features to advanced topics and power use!
\$29.95

FoxPro 2.0 6-Pack Microsoft Corporation

Adds network support to the features of single-user FoxPro 2.0. When installed on a network file server, it may be accessed by up to six workstations simultaneously. Additional workstations require additional 6-Packs. Supports exclusive or shared use of files, file and record level locking, automatic locks, programmable locks and multiple file or record locks per station.

List: \$895 Ours: \$529
FAXcetera #: 1506-0006 Return: O
60 day unconditional

FoxPro 2.0 Library Construction Kit Microsoft Corporation

Allows creation of FoxPro API libraries in C or Assembly code. Includes a specialized version of the Watcom™ C compiler and INCLUDE libraries necessary to interface with FoxPro's internal routines. Libraries created may be used interactively from the FoxPro command window, in applications run under FoxPro, or in distributed runtime or .EXE applications.

List: \$500 Ours: CALL
FAXcetera #: 1506-0005 Return: O
60 day unconditional

Iconic Query 1.0 IntelligenceWare

The easiest to use visual database interface ever. Iconic Query changes the nature of database access by introducing "what-you-see-is-what-you-ask" query approach, allowing a user to point and click at visual scenes instead of using a query language. It makes databases immediately available to everyone—with no prior training. You just click on interesting icons, and get instant answers to queries.

List: \$290 Ours: \$270
FAXcetera #: 1798-0009 Return: N

IXL: The Discovery Machine 3.0 IntelligenceWare

IXL, which stands for Induction on Extremely large Databases, finds previously unknown rules, patterns and correlation in existing databases. The analysis of IXL may be shaped by the user towards a specific task, or IXL may be set to roam freely through the database. The system outputs easy-to-read rules which characterize data, providing insight and understanding. IXL is a combination of a built-in query processing module and database interface, a built-in statistical module for data analysis and a discovery and induction module for rule generation.

List: \$790 Ours: \$709
FAXcetera #: 1798-0013 Return: N

MicroSTEP QS 1.61 SYSCORP International

MicroSTEP QS is a visual programming tool for creating and maintaining database applications. MicroSTEP QS creates high-performance client/server applications without requiring network expertise. Supports Btrieve, dBASE, ASCII and NetWare SQL.

List: \$895 Ours: \$805
FAXcetera #: 1004-7701 Return: F

Paradox 4.0 Borland International

Ask complex, ad hoc data questions with Query-by-Example (QBE). Create multi-table forms and reports, and export/import Borland Quattro Pro spreadsheets. Utilize PAL (Paradox Application Language)—a powerful, full-featured development language for developing mission-critical applications—and VROOM dynamic memory utilization, all leading to substantial performance gains for Paradox users.

List: \$795 Ours: \$596
FAXcetera #: 1862-0001 Return: F

**ORDERS PLACED
BEFORE 2 PM
FOR PRODUCTS
IN STOCK ARE
SHIPPED THE
SAME DAY!**

dBASE COMPILERS

ARAGO Quicksilver 2.5

WordTech Systems, Inc.

Allows you to compile ARAGO dBase or dBASE IV applications into stand alone executable files that do not require distribution royalties. These .EXE files are small, run faster because they are created in machine code, and protect application source code. Applications compiled with ARAGO Quicksilver support multi-user capabilities without modifying source code.

List: \$799 Ours: \$645
FAXcetera #: 0539-0002 Return: F

Clipper 5.01

Computer Associates

Clipper is a comprehensive PC application development system for PCs offering network support, user-extensibility, a replaceable database driver and executable file generation. An open architecture system, Clipper 5.0 includes a robust language, pre-processor, compiler, linker, virtual memory manager, editor and debugger, and permits development of applications that are larger than available memory.

List: \$795 Ours: \$499
FAXcetera #: 5400-0001 Return: L

Quicksilver/SQL 1.3R WordTech Systems, Inc.

Compiles dBASE application programs to run in combination with a SQL-based database server engines. Through the use of invisible SQL and embedded SQL, the developer can seamlessly integrate the dBASE language and SQL. Invisible SQL automatically and transparently maps dBASE commands to a SQL database as needed. Embedded SQL allows SQL queries to be explicitly formulated within a dBASE application to gain maximum efficiency. Since an application can use both invisible SQL and Embedded SQL, developers can maintain their investment in dBASE by making a gradual transition to the use of SQL.

List: \$1495 Ours: CALL
FAXcetera #: 0539-0003 Return: L

WATCOM SQL Developer's Edition - NEW! WATCOM

A complete client/server development tool including a standalone single-user SQL database server. Allows you to develop and deploy single-user standalone applications, and to develop applications for use with the WATCOM SQL Network Server Edition. You get the ACME (Application Creation Made Easy) front-end application development system. ACME combines visual forms design with simple event-driven programming to allow rapid prototyping and development of client applications without C programming. The Developer's Edition also includes IBM SAA standard embedded SQL support for C/C++ application development with WATCOM, Microsoft, and Borland compilers. Components include: single-user standalone database server (both 16- and 32-bit versions); Interactive SQL; ACME front-end application development system; embedded SQL/C preprocessor; SQL libraries for use with WATCOM C, WATCOM C/386, Microsoft C/C++ and Borland C/C++. Comes with both 5.25" and 3.5" diskettes.

Special Introductory Offer!
List: \$795 Ours: CALL
FAXcetera #: 1683-0010 Return: O
Full 60 day guarantee.

WATCOM SQL

PC-based Client/Server SQL Tools

Four Good Reasons to get your copy right away:

1. True Client/Server for reliability and performance

Your databases are protected from corruption by features such as referential and entity integrity, as well as true transaction processing. Client/server architecture and our 32-bit database server software help deliver increased performance for applications running on your PC LANs.

2. Royalty-free run-time

For just \$99 you get royalty-free run-time support. It lets you distribute applications for standalone PCs and include our single-user run-time database server. It also lets you distribute your applications on an unlimited number of client machines in network environments.

3. Scalability

Whether you implement applications using the ACME front-end or write them in C or C++, they can be designed to run without change in environments ranging from standalone 640K single-user PCs to large networks running our

high-performance multi-user database server.

From entry level PCs...

You can use DOS PCs with just 640K memory as database server machines for small networks. For single-user standalone environments, the SQL database server together with an application can run on DOS PCs equipped with a minimum of 640K memory.

...to high end servers.

The WATCOM SQL database server automatically adapts to utilize the available memory on your system for increased performance. The 32-bit version unleashes the power of 386/486 PC's to efficiently serve many clients in large networks.

4. For a limited time it's yours for just \$395

WATCOM SQL Developer's Edition has a suggested retail price of \$795 but for a limited time you can get it at the introductory price of only \$395. Even better, as a registered user of the Developer's Edition you'll be able to get a copy of the 6-user Network Server Edition for only \$99 (Suggested retail price: \$795).

Developer's Edition

Complete Client/Server Development Tools Package Including Standalone Single-user SQL Database Engine

The Developer's Edition allows you to develop and deploy single-user standalone applications, and to develop applications for use with the WATCOM SQL Network Server Edition. You get the **ACME (Application Creation Made Easy)** front-end application development system. It combines visual forms design with simple event-driven programming to allow rapid prototyping and development of client applications without C programming. The Developer's Edition also includes IBM SAA standard embedded SQL support for C/C++ application development with WATCOM, Microsoft and Borland compilers.

Package components include: Single-user standalone database server (both 16 and 32-bit versions) • Interactive SQL • ACME front-end application development system • Embedded SQL/C preprocessor • SQL libraries for use with WATCOM C, WATCOM C/386, Microsoft C/C++, and Borland C/C++.

System Requirements:

Hardware: IBM PC compatible with hard disk, 640K minimum memory
Software: DOS, Windows DOS box, or OS/2 DOS box

Special Introductory Offer: \$395 (Suggested retail price: \$795)

Special offers available to registered users: (details inside package)

- Royalty-free run-time support: \$99
- 6-user Network Server Edition: \$99 (Suggested retail price: \$795)

Network Server Edition

High-performance Multi-user SQL Database Server for PC LANs

The Network Server Edition provides client/server support for multiple concurrent users in a local area network environment. The WATCOM SQL database server supports ANSI standard SQL and provides advanced capabilities, including bi-directional scrollable updatable cursors, referential integrity, row-level locking and symmetric multiprocessing of requests. WATCOM SQL also gives you comprehensive security capabilities, data encryption and data compression. Compatible programming interfaces let you implement applications that run without change using either the standalone single-user database or the Network Server Edition.

Package components include: Multi-user network database server (both 16 and 32-bit versions) • Interactive SQL • Network requestor and request manager.

Client System Requirements:

Hardware: IBM PC compatibles, 640K minimum memory
Software: DOS, Windows DOS box, or OS/2 DOS box

Database Server System Requirements:

Hardware: IBM PC compatible with hard disk, 640K minimum memory
Software: DOS

Network Requirements: NetBIOS or Novell Netware (IPX)

Suggested Retail Price: 6-user version: \$795
Unlimited version: \$1,595

WATCOM, 415 Phillip Street, Waterloo, Ontario, Canada N2L 3X2
Telephone: (519) 886-3700, Fax: (519) 747-4971

Prices do not include freight and taxes where applicable. Authorized dealers may sell for less. WATCOM SQL, the Lightning Device, and Application Creation Made Easy are trademarks of WATCOM International Corporation. Other trademarks are the properties of their respective owners. Copyright 1992 WATCOM International Corporation.

WATCOM

1-800-265-4555

The Leader in Development Tools

DOS DEVELOPMENT SOFTWARE

WATCOM SQL Network Server Edition 3.0

WATCOM
The WATCOM SQL Network Server Edition is a high-performance multi-user SQL database server for PC LAN's. The Network Server Edition provides client/server support for multiple concurrent users in a local area network environment. The WATCOM SQL database server supports ANSI standard SQL and provides advanced capabilities, including bi-directional scrollable cursors, referential integrity, row-level locking and symmetric multiprocessing of requests. WATCOM SQL also gives you comprehensive security capabilities, data encryption, and data compression. Compatible programming interfaces let you implement applications that run without change using either the standalone single-user database or the Network Server Addition. Components include: multi-user network database server (both 16 and 32-bit versions); interactive SQL; network requestor and request manager. Requires NetBios or Novell Network (IPX). Comes with both 5.25" and 3.5" diskettes.
6 User Version List: \$795 Ours: \$639
Unlimited List: \$1595 Ours: \$1279
FAXcetera #: 1683-0011 Return: O
Full 60 day guarantee.

dBASE APPLICATION GENERATORS

ERwin/DBF Logic Works

Logic Works ERwin/DBF brings the power of Logic Works ERwin/ERX to dBASE developers. Build a data model and ERwin/DBF will generate a complete dBASE schema. ERwin/DBF will also import dBASE schemas to help you maintain your existing applications. When used in concert with ERwin/SQL or ERwin/ERX, ERwin/DBF can help you migrate your applications between dBASE and other DBMS platforms.
List: \$795 Ours: \$716
FAXcetera #: 2666-0002 Return: N

R&R Report Writer Code Generator 4.0

Concentric Data Systems, Inc.
Designed for developers working with dBASE compatible databases. Translates reports saved with Version 3 or 4 of R&R for dBASE into dBASE programs in just seconds. Generates code compatible with dBASE IV, Clipper Summer '87, Clipper 5.0, FoxBASE+, or FoxPro. The resulting code is modular and efficient, and can optionally include comments. It can be modified, compiled, linked, and/or ported to other environments. All features of Version 4 of R&R for dBASE are supported, including proportional fonts and preprocessed totals.
List: \$199 Ours: \$159
FAXcetera #: 1638-0004 Return: F

UI2 Programmer Version 2.1

Template Garden Software
UI2 is a powerful development environment which includes an editor for designing screens and reports, an integrated, easy-to-use data dictionary, and a template driven applications generator. UI2 includes a complete set of templates that generate dBASE III, dBASE IV, Clipper, FoxBase+, FoxPro, QuickSilver, dBase and C programs.
List: \$595 Ours: \$536
FAXcetera #: 0910-0003 Return: F

UI2 Touch and Go 1.0

Template Garden Software
Code generator for developing complete, full-featured, customized applications. Incorporates UI2's screen/report editor and data dictionary, but not the template compiler. Easy upgrade path to UI2 Developers' Release which offers additional templates for component parts of applications as well as an object-oriented template language for modifying or writing templates. Supports dBASE, FoxPro, FoxBase+, Clipper, QuickSilver, dBase.
List: \$395 Ours: \$356
FAXcetera #: 0910-0001 Return: F

Vern Six's Designer/Translator 1.0

FrontLine Software
The designer generates expert Clipper 5.01 code for user interface screens. This eliminates hours of tedious work and time associated with coding user screens. A unique feature of the designer is the capability to change the display to any language for the user (Spanish, French, German), without writing different versions of the application. Complete source code is available at no additional cost. The designer is written to take full advantage of Vern Six's Clipper ToolBox 9.0 (Available separately).
List: \$120 Ours: \$79
FAXcetera #: 1004-7601 Return: N

DOCUMENTATION AIDES

CLEAR for dBASE 2.1

Clear Software
CLEAR helps dBASE language developers understand and document code by automatically drawing program flow charts, multi-level tree charts, and formatted source listings. While processing applications, CLEAR analyzes a program's logic and reports logical inconsistencies & syntactical errors. Supports dBASE II, III, III plus, IV, FoxBASE, FoxPRO, Clipper, QuickSilver, and dBase.
List: \$199 Ours: \$175
FAXcetera #: 1853-0001 Return: F

Documentor, The 1.51

Template Garden Software
Productivity tool designed for navigating large, complex Xbase systems. Provides full analysis and debugging capabilities, as well as complete technical documentation detailing the mechanics, logic, structures and elements of an application. Creates action diagrams, concordance reports, hierarchy outlines/box diagrams, hierarchy calling tree/system tree, DBF/index reports. Supports dBASE, FoxPro, FoxBase+, Clipper, QuickSilver, dBase.
List: \$295 Ours: \$266
FAXcetera #: 0910-0002 Return: F

Lamaura Data Dictionary

Market Service Associates
The Lamaura Data Dictionary provides a centralized source for information about all your databases. It allows structures and relations to be prototyped and tested before any code is written. It assists in ensuring proper database design, normalization, data and referential integrity and prevents circular references. Complete documentation may be stored. Tables may contain virtual fields. Reports contain all data about fields, tables, relations, indexes, etc., as well as associated documentation. The universal dictionary allows access to any fields. The Supervisor function of the data dictionary

allow configuration and maintenance. Multi-user versions include three security level. Supports dBASE II Plus, dBASE IV, FoxBASE, FoxPro, Clipper and Arago. Supports all .DBF files, multiple index files, (.MDX, .CDX) and .NTX, .NDX, and .IDX index files. When used in combination with the Dynamic Data Dictionary, Clipper 5.01 applications follow definition (including validation and picture clauses) stored in the Lamaura Data Dictionary and have access to full network independent transaction processing capabilities. See Dynamic Data Dictionary for further information.
single user List: \$395 Ours: \$335
five-user List: \$995 Ours: \$845
FAXcetera #: 2697-0001 Return: L

GRAPHICS

ColrTrax 1.0

Blackhawk Data Corporation
A presentation-quality color screen-print routine for the HP PaintJet, PaintJet XL, PaintJet XL300, and the HP DeskJet 500C. Any screen can be accurately printed from 40x25 text mode up to 1024x768x256 color graphics modes. Blazingly fast, ColrTrax produces high quality output with a sophisticated bi-directional error-diffusion filtering technique. ColrTrax lets the user adjust hue weights (red, green, and blue), contrast, color saturation, brightness and size of output images.
List: \$149 Ours: \$134
FAXcetera #: 3051-0003 Return: L

dGE 4.2

Pinnacle Publishing, Inc.
Database graphics package. Graphing functions include pie, high-low-close, polar, time series, 3D bar, bar and Cartesian. Supports dBASE III/IV, Clipper, QuickSilver, FoxBase+, dBase, Eagle and Microsoft, Turbo and Quick C.
List: \$299 Ours: \$239
FAXcetera #: 1794-0014 Return: O
Full 60 day guarantee.

dGE Font Library Volume 1 1.0

Pinnacle Publishing, Inc.
Provides more than 40 typefaces that will add flair and professionalism to your dGE 4.x applications. Typefaces included with this package include System as well as traditional, decorative, and foreign language faces. The Font Library's typefaces are arranged into over 100 unique fonts, all designed using dGE's GFONT editor, and the three included font design utilities—QuickScale, QuickRotate, and QuickFix—that allow you to modify the provided typefaces to produce the exact size and orientation you need.
List: \$59 Ours: \$53
FAXcetera #: 1794-0015 Return: O
Full 60 day guarantee.

dGE Icon Library Volume 1 1.0

Pinnacle Publishing, Inc.
The dGE Icon Library, volume 1, is a collection of 1000 icons that you can incorporate into your dGE 4.x applications. These icons can be used in an endless variety of design situations in GUI's, in legends or logos, even as error messages. The Icon Library is comprised of 126 dGE icon files, each containing 8 icons. Since all the icons were created using dGE's GFONT font and icon editor, you can edit them to suit the needs of your application.
List: \$59 Ours: \$53
FAXcetera #: 1794-0016 Return: O
Full 60 day guarantee.

Database Graphics Toolkit ("dGT") 3.02

Blackhawk Data Corporation
Provides cost-effective imaging support for over 10,000 applications running under 40 different languages. PHOTO retains your text as a graphic, then superimposes a miniature copy of your image onto the screen. Photographic quality images on a standard VGA. EXHIBIT is a full-screen full-color image viewer; it's state-of-the-art anti-aliasing lets you read a full page of text on a standard monitor! LASRTRAX hard-copy routine produces presentation quality hard-copy from virtually any screen! NEW FEATURES for dGT 3.02! New Color optimization routine; now supports R:Base UDF's; international MS/DOS Code Pages; and full page document print.
List: \$345 Ours: \$305
FAXcetera #: 3051-0001 Return: L

dGT-Developer's Edition

Blackhawk Data Corporation
Blackhawk's Developer's Edition of the Database Graphics Toolkit ("dGT") consists of one copy of dGT plus six Runtime Licenses. This provides developers with the option to add imaging to existing applications by bundling a low-cost dGT Runtime License with each copy of their application. For detailed specifications see listing of Database Graphics Toolkit ("dGT") in this section.
List: \$698 Ours: \$595
FAXcetera #: 3051-0002 Return: L

dGT - Unlimited 3.02

Blackhawk Data Corporation
dGT Unlimited is a ROYALTY-FREE version of the Database Graphics Toolkit which provides imaging solutions for over 40 different languages. Features include: 256 color images or B/W; two viewers for miniature images or full-screen images; automatic scaling; hardware panning; multiple images per screen, supports PCX, DCX, GIF, SCX & PCL formats; presentation quality printing on any LaserJet series; network ready - works on standard office monitors up through super-VGA. For detailed specifications see listing of dGT Single User in this section.
List: \$595 Ours: \$535
FAXcetera #: 3051-0004 Return: L



**WE ACCEPT
MAJOR CREDIT
CARDS**

DOS DEVELOPMENT SOFTWARE

dGT

PAINLESS PICTURES!

dGT

Our **Database Graphics Toolkit (dGT)** gives you sophisticated imaging in a flash: just add an image pointer to your database and hook up our software viewers!

Data Based Advisor said, "An elegant solution . . . I was up and running in 15 minutes . . . Presentation quality output. Fast and compact . . . Overall, I give it two snaps up."

PHOTO projects one or more miniaturized images over a text screen, in any of six window formats — produces photographic quality on any VGA.

EXHIBIT resizes images to fit your screen, or "pans" oversize images using the entire video buffer — state-of-the-art anti-aliasing lets you read a full page of text on any VGA.

LASRTRAX prints the screen to your laser printer, in either portrait or landscape mode — produces presentation quality hard copy from virtually any screen.



DBMS said, "An impressive collection . . . Faithful reproductions . . . Does a marvellous job . . . An outstanding value."

dGT runs on any VGA or EGA, and supports GIF, PCX, SCX, and HP PCL files in 2, 16 or 256 colors, in virtually any size, and can display images directly from memo fields and BLOBs.

Interactive "working demo" available: get "DBGREFX.ZIP" from CompuServe (GO DBA, library 4: Windows & Graphics), or any of several BBS's, like Clarion Tech Journal or Paradox Informant.

In use at over 12,000 sites, in 49 states and 38 foreign countries, **dGT** is fast, powerful, reliable, and flexible — it works with 35 different database languages — so far!

Unretouched CRT display

dGT is priced at just \$295 (Single User) or \$595 (Unlimited), plus shipping. Overnight delivery available. Visa, MasterCard, and American Express accepted.

NEW! Royalty-Free Pricing!

dGT Single User is still competitively priced at \$295, but now our new **dGT** Unlimited version, network-ready and with virtually unlimited royalty-free distribution rights, is available for just \$595!



Blackhawk Data Corporation
7234 W. North Ave, Suite 411
Elmwood Park, Illinois 60635
708/453-9590 Fax: 708/453-9005



DOS DESCRIPTIONS

SEE YOU AT COMDEX '92

Come meet us in person at COMDEX/Fall 1992,
the world's largest gathering of PC Computer enthusiasts.



Programmer's Paradise®

Our island festivities will include:

- Popular product demos
- Daily software giveaways
- Show-only software specials
- Exciting contests

AND MORE!

Programmer's Paradise®
BOOTH #H7442

COMDEX®/Fall
The International Trade Show
for Computer Distribution Professionals
November 16-20, 1992 • Las Vegas, Nevada



TO ORDER CALL (800) 445-7899

DOS DEVELOPMENT SOFTWARE

ddMap 2.0

CS Communications, Inc.

ddMap adds Graphical Location Display to Relational Database Application development. It combines images onto a common grid coordinate system and then lets the user overlay database records as icons onto these images. ddMap is perfect for creating a Graphical Location Inventory System for people, equipments, and events. Maps/drawings are stored in TIF (USA, States, Facilities, etc.). ddMap is a complete application developer and uses dBASE II files. It can be operated in Clipper compatible or standalone mode. Available in library format.

List: \$495 Ours: \$446
FAXcetera #: 1002-5701 Return: F

Espia 2.0

Devices, Inc.

Espia from Devices, Inc. uses an unprecedented technology to turn FoxPro-DOS into a graphical DataBase Management System. Now you can view your FoxPro data graphically without leaving FoxPro. Espia is seamlessly integrated with FoxPro's Screen Builder, Report Writer and RQBE. Espia allows creation of custom 2D and 3D graphs for screen display and printing. Images can be stored in memofields and displayed in a FoxPro window or printed at any size and position. Use Espia's E-Wins to display graphs and images in moveable, resizable graphic windows. Espia's integration with RQBE allows the output from your query to be plotted in an overlapping E-win. Espia includes special device drivers for direct capture of images and audio from video cameras, scanners, digital cameras and audio boards. The data may be captured from a screen using a GET clause and stored in a memofield or file. Also included with Espia is MANIPX, a powerful image conversion program. Special LAN version works with FoxPro 6-Pack.

List: \$295 Ours: \$249
LAN version List: \$395 Ours: \$335
FAXcetera #: 1005-0701 Return: F
See special bundle offer on page 9.

Espia 2.0 Enhanced Devices, Inc.

All the features of Espia plus access to the underlying graphic command set. This gives X-BASE programmers the power of Espia in an easy-to-learn API. Over 150 commands are available in the following categories: graphic primitives, image display, image processing, printing, video/scanner capture, audio record/playback. Also includes extensive on-line help system with examples and corresponding graphic output for every command. Special LAN version works with FoxPro 6-Pack.

List: \$595 Ours: \$505
LAN version List: \$695 Ours: \$589
FAXcetera #: 1005-0702 Return: F

FLIPPER Graphics Library 5.0 ProWorks

A function library that quickly and seamlessly integrates graphics into Clipper applications, featuring: an extensive variety of XY and pie charts, 3D, and area graphs; a CAD interface for drawing maps and other vector images; plus, automatic axis scaling; multiple graph types per screen; unlimited graph points; save/restore .PCX pictures; virtual printer driver capability; postscript; APGL support; CGA, EGA, VGA, and Hercules support.

List: \$295 Ours: \$266
FAXcetera #: 1697-0001 Return: F

FoxGraph 1.00

Microsoft Corporation

An outstanding presentation graphics program for IBM and IBM compatible PCs. FoxGraph allows creation of custom 2D and 3D graphs for screen display & printing or export to a paint program or desktop publisher. Utility programs provided with FoxGraph allow data created with FoxPro, FoxBASE+, dBASE III PLUS, dBASE IV, or dBase to be passed directly to FoxGraph for plotting.

List: \$295 Ours: \$207
FAXcetera #: 1506-0004 Return: N

SilverPaint Library 2.0 Silverware

Draws everything from simple lines, boxes and circles to complex logos and animation. Attach an image to a database file and display the .PCX image everywhere on-screen. Palette includes 256 blendable colors, full graphics and pixel control with low overhead. Combine text with graphics. Includes full-range sound generator. On-line help for Norton Guides Database.

List: \$129 Ours: \$103
FAXcetera #: 1678-0004 Return: O
90 day money back guarantee

Sunshow 3.0

Pinnacle Publishing, Inc.

Image database for Clipper and FoxPro. Add images to your favorite database language for an innovative image database application. A complete system containing the right tools for the right job. Everything you need to make a professional, fully functional image database is included. No TSR's are necessary or required. Popular image file formats supported are: GIF, PCX, 8-, 16-, and 24-bit Targa, TIFF, etc. Full support for CGA through Super-VGA.

List: \$299 Ours: \$255
FAXcetera #: 1794-0027 Return: O
Full 60 day guarantee.

Sunshow Advanced Image Toolkit 2.0

Sun Country Software

HIGH RESOLUTION Developer version. The database programmer now has image capabilities to 1024 x 768 resolution within image database applications for popular DBMS languages, dBASE III/IV, Clipper, DBXL, Quicksilver, R:Base. Includes our SVGA proprietary SUNSAY and SUNGET (high resolution versions) functions for merging text and raster-based images and for interactive data entry on image. More file format conversions (includes complete TARGA & TIFF support), merging of multiple high resolution images, proprietary color quantizing, etc. Our special device drivers are included for image capture boards, color scanners. Supported are Targa, Vision, ATronics, ComputerEyes, Mitsubishi, Sharp, Howtek, Texnai, Microtek, more. Extremely powerful and very easy to use. Professional application developer quality.

List: \$350 Ours: \$315
FAXcetera #: 2989-0003 Return: N

Sunshow Database Professional 2.0

Sun Country Software

Introductory package which includes everything needed for the database programmer to make text-based database into a full-featured image database for dBASE III/IV, Clipper, DBXL, Quicksilver. Includes our proprietary, SUNSAY and SUNGET functions for merging text and raster-based images and for interactive

data entry on an image. Many file format conversions, merging of multiple images, proprietary color quantizing, etc. Our functions work with the same logic and coding style that the DBMS programmer is comfortable with, lessening the learning curve. Supports the generic video modes-CGA through VGA and also Hercules.

List: \$200 Ours: \$180
FAXcetera #: 2989-0002 Return: N

Sunshow Professional 3.0

Pinnacle Publishing, Inc.

Image database application tools for Clipper or FoxPro for high resolution image databases. Full support for CGA through Super-VGA. Combine text from record fields with images, scale, clip, push & pop windows, image processing, printing functions, more. Supports popular image file formats: GIF, PCX, 8-, 16-, 24-, and 32-bit Targa, TIFF 4.2/5.0, etc. Graphic mode say/get, and print/print. Graphic mode Hewlett Packard Laserjet II, Paintjet, & Epson dot matrix printer support.

List: \$299 Ours: \$255
FAXcetera #: 1794-0028 Return: O
Full 60 day guarantee.

T-BASE 3.0

Videotex Systems Inc.

Clipper, dBASE, FoxPro, C users-add pictures and documents to your applications with the T-BASE library. Features include: color or B/W images, automatic scaling, multiple images. Works on super-VGA, VGA, EGA, CGA or mono, display images in any location, display images with existing text, scroll images in a window, and print images to Laserjet. NO ROYALTIES. Includes Chroma Tools, the ultimate image conversion utility.

List: \$495 Ours: \$419
FAXcetera #: 8888-0001 Return: N

QUERY/REPORT GENERATORS

Clarion Report Writer 1.0

Clarion Software

Clarion's Report Writer offers the ability to use fields in data files for fast and easy generation of ad-hoc queries and reports. Performs calculations and filters on data and presents results. "Joins" separate files and reads Clarion, dBASE, dIF and BASIC files. The environment is menu-driven and features "logical" printer support. On-line context sensitive help is provided.

List: \$199 Ours: \$179
FAXcetera #: 1862-0003 Return: L

dQuery 4.5

QUADBASE SYSTEMS, Inc.

An interactive query management system and report writer for dBASE and Lotus 1-2-3 users. It supports SQL, QBE and dBASE programming constructs. It is designed for developers as well as end users who need to get information out of the data files quickly for analysis, interpretation and reporting in an ad hoc manner. The file formats supported are dBASE III/IV, Clipper, Foxbase and Lotus 1-2-3. It can import and export ASCII files. dBASE data can be reduced and saved in Lotus files and vice versa. In addition to the ad hoc query capabilities, you can also easily build executive information systems for end users. Because of its power and user friendliness, dQuery has consistently won the Data Based Advisors Reader's Choice award for the "Best query tool".

List: \$195 Ours: \$176
FAXcetera #: 1864-0001 Return: L

CALL TODAY!!

Sun Country's

Professional Imaging Tools

8, n, 1 24hrs
BBS 12/24/96

SHOWCAT Image Catalog

Multi-format, multi-video mode SVTGA GUI image catalog supports 14 formats- GIF, PCX, TGA, Edsun CEG, FLI animation, digital audio, with graphical navigations, 3-D buttons. Attach user-defined text field notes to each image. Over 40 SCGA cards supported. \$199.95

SUNSHOWIMAGE Converter

Easy to use format converter with graphical interface, 3-D buttons, batch mode. Supports 14 formats including Edsun CEG, TARGA, TIF, PCX, GIF. Over 40 SVGA cards supported. Powerful. \$249.95

SUNSLIDE Presenter

SVGA Image slide show with scripting capabilities, supporting 14 different formats including Edsun CEG, IPEG, GIF, PCX, multi-video modes, easy installation, over 40 SVGA cards supported, more. \$99.95

SUNJPEG Ultra Compression

Your application can directly display compressed JPEG images with up to 45:1 compression ratios. Convert to/from JPEG, TGA, PCX, GIF, specify variable compression, raw/dithered, display multiple, tiled JPEGs, force video mode, YUV/YIQ, palette options, no compression boards or co-processors required. Over 40 SVGA cards supported, more. \$299.95

SUNSCAN Digital Scanware

The easiest to use DOS-based flat bed scanner program according to PC computing. Image processing, SVGA support-over 40 SVGA cards, supports Sharp, Howtek, Epson, Microtek, H-P, Texnel, Scans PCX, GIF, Edsun CEG, and TIF and Targa to 24-bit. Graphic printing support. \$299.95

Sun Country Software, Inc.
7102 Ilfield Road Southwest
Albuquerque, New Mexico 87105

● FAX 505-877-4443 ● MacMax Image BBS 12/24/96 8, n, 1 24hrs



Espia introduces a revolutionary idea for the 90s. Togetherness.

It's an idea that's right for the times. Truly integrated software for adding the power of pictures to FoxPro. Unlike other graphics packages, Espia 2.0 doesn't force you to work with separate text and graphics screens. With Espia's E-WINS, graphics and text are not just together on the same computer, they're together on the same screen, in the same application, at the same time.

By running your database under graphics mode, Espia lets you enjoy a graphical windowing environment, including the unique ability to work simultaneously with text and graphics, even while running under MS-DOS.

What's more, Espia graphics run at near text mode speed, something you have to see to believe. And, for a limited time, we're making that very easy to do.

Money back if not ecstatic.

Use Espia, risk free, for 30 days. If you don't become a fanatical fan, return it and we'll give you your money back. No hassle. No third degree.

To order either Standard Espia, or the Enhanced Espia for FoxPro or dBase IV, call Devices, Inc. at 1-805-565-3838.

We'll help you add the power of pictures to your database. Together.

FoxPro - DOS

OUTPUT TRACKS BROWSE

System File Edit Database Record Program Window Run

Databases: >FPD_SALE

Output Fields: LASTNAME, FIRSTNAME, TERRITORY, BARKY, CANINE, BOSEY

Output To: Graph, ESPIA, Options...

Field Name: NOT, Example

Lastname	First	Canine	Headshot
Elm	Dorah	23934	Memo
Magnolia	Sally	32392	Memo
Maple	Regis	76542	Memo
Oak	Phil	42338	Memo
Sequoia	Gerald	28292	Memo

Command: mod query espia, DO ESPIA.QPR, browse last

YTD Dog Food Sales

80000
60000
40000

CANINE

COMpletely INTERACTIVE NO "MODAL" GRAPHICS

CLock

FULLY RESIZABLE AUTO-SCALE OR PAN

SUPPORTS 25 TO 50 LINE MODES UP TO 132 COLUMNS (MAX. 1024 X 768)

CUSTOMIZEABLE WINDOWS

E-WINS ARE ESPIA'S OWN MOVEABLE SCALABLE WINDOWS FOR DISPLAYING BOTH TEXT AND GRAPHICS

FEATURES: Direct Capture/Display From Scanner, Video And Audio • Paint-Style Toolbox • Transparent Images • Extensive Printer Support • Graphic Screen Capture • Powerful On-Line Help Facility • Complete Graphic Command Set (150+ Commands) • BONUS: MANIPX Image Utility (Format Conversion, Color Reduction, Dithering)

SYSTEM REQUIREMENTS: IBM or compatible PC, dBase IV or FoxPro 2.x, EGA, VGA or Super-VGA, CPU-80286
SUGGESTED: 80386/486, Mouse OPTIONAL: Extended or Expanded Memory, Scanner, Video Capture Board, Audio Board
© 1992 Devices, Inc. All product names and trademarks are the property of their respective owners.

Espia

*The Power Of Pictures
Comes To Database*

Espia is a product of Devices, Inc. To order, call 1-805-565-3838, or write P.O. Box 42430, Santa Barbara, California 93140.

Grumpfish Reporter Standard Version 1.0

Grumpfish, Inc.
Grumpfish Reporter is a full-fledged report and ad-hoc query manager. Its intuitive pull-down menu structure allows end users to be more productive immediately without having to overcome a steep learning curve. Grumpfish Reporter is written 99.9% in Clipper 5.01, and well-commented source code is available. This means that Clipper 5.01 developers can link any or all Grumpfish Reporter modules directly into their applications.
List: \$159 Ours: \$135
FAXcetera #: 2409-0001 Return: L

Grumpfish Reporter Developer's Version 1.0

Grumpfish, Inc.
The Developer's Version includes all of the Clipper 5.01 source code, which enables you to link any or all of Grumpfish Reporter directly into your Clipper application. (Because Grumpfish Reporter uses many functions from Grumpfish Library, you will require Grumpfish Library in order to link.
List: \$159 Ours: \$135
FAXcetera #: 2409-0002 Return: L

Neural/Query 1.0

IntelligenceWare, Inc.
Use neural networks and fuzzy technology to generate answers to inexact queries. Neural/Query finds partial matches and provide "Best Guesses" with the help of a user friendly concept dictionary. Human-like thought patterns such as young, old, short or tall can now be incorporated into queries based on the users weighting and definition.
List: \$490 Ours: \$449
FAXcetera #: 1798-0004 Return: L

ProPrint Report Generator 2.1

Conquest Data Systems
One version supports ALL. PARADOX, Btrieve, dBASE compatible, ASCII, and binary data file formats. Full screen interface allows developers or end-users to interactively create and run reports using easy-to-use WYSIWYG line and field formatting. Send output to screen, disk, or printer. Rich set of functions for creating user subroutines to perform math and string operations, loops, and logic. Complete on-line help. Optionally, generate C code for creating .EXE. ORACLE database support using Pro*C.
List: \$189 Ours: \$170
FAXcetera #: 1004-5101 Return: N

Q+E Database Server Edition 2.6

Pioneer Software
A Windows and OS/2 query and editing tool to display, query, sort, search, join and edit relational data. Supports DDE to hotlink data into any other application and is simple enough for all users. Can access data from dBASE, Paradox, Oracle, DB2, SQL*Server, Sybase, Netware SQL, EE Database Manager, text files, and Excel files.
List: \$299 Ours: \$269
FAXcetera #: 2625-0001 Return: F

Q+E Database Library (QELIB) 1.0

Pioneer Software
A set of Dynamic Link Libraries providing a common call level interface for developer tools such as Visual BASIC, ToolBook, Actor, Smalltalk, C, C++, etc. and most macro language products to access data from Oracle, SQL Server, Sybase, EE Database Manager, DB2, Netware SQL, dBASE, Paradox, Excel, and Text files.
List: \$299 Ours: \$279
FAXcetera #: 2625-0002 Return: F

R&R Report Writer for dBASE and compatibles 4.0

Concentric Data Systems, Inc.
A full-featured relational Report Writer for dBASE compatible databases. Designed for end-users or developers, reports can be created faster and more easily than with dBASE or other databases, without requiring any programming. Reports can be called from within application programs using the R&R Runtime Module included free with an unlimited license. R&R brings enhanced printer drivers, proportional font support, graphics-based page preview, instant reports, and pre-processed totals to dBASE report writing. LAN Six-Pack licenses are available with serial numbers for six additional users.
List: \$249 Ours: \$159
FAXcetera #: 1638-0003 Return: F

R&R Report Writer for Netware SQL/Btrieve 3.0

Concentric Data Systems, Inc.
This is a full-featured, relational Report Writer for NetWare SQL, and QXL or Btrieve databases running in a NetWare environment. Like R&R for dBASE, it is designed for end-users or developers. Reports can be created quickly and easily, without requiring any programming or knowledge of SQL, and it is simple enough for end-users to create their own reports. Reports can be called from within applications using the R&R Runtime Module included free with unlimited distribution license.
List: \$299 Ours: \$269
FAXcetera #: 1638-0007 Return: F

R&R Report Writer for Paradox

Concentric Data Systems, Inc.
This is a full-featured, relational Report Writer for Paradox tables and databases. Designed for end-users or developers, reports can be created faster and more easily than with Paradox, without requiring any programming. Reports can be called from within PAL application programs using the R&R Runtime Module included free with an unlimited distribution license. With the same features as R&R for dBASE, Paradox reports can now be created using R&R's enhanced printer drivers, proportional font support, graphics-based page preview, instant reports, and pre-processed totals. LAN Six-Pack licenses are available with serial numbers for six additional users.
List: \$249 Ours: \$159
FAXcetera #: 1638-0006 Return: F

SCREENS/MENUS

SayWhat?! 4.0

Software Science, Inc.
SAYWHAT?! is a standalone, all-in-one toolkit for quickly creating screens for menus, data entry or display, help panels and even "slide" shows. SAYWHAT?! screens can be displayed from any programming language with a single line of code. SAYWHAT?! also creates screens quickly and easily for use by non-programmers from the keyboard and through batch file "SCRIPTS".
List: \$50 Ours: \$45
FAXcetera #: 1804-0002 Return: F

SQL

ERwin/ERX 1.1

Logic Works
Logic Works ERwin/ERX adds flexible import/export capabilities to the features of ERwin/SQL (see separate listing). This powerful reverse-engineering capability can help you perform such tasks as maintaining and enhancing your existing databases or migrating your applications from one DBMS to another. ERwin/ERX generates SQL CREATE TABLE and CREATE INDEX code for DB2, ORACLE, INGRESS, INFORMIX, NETWARE/SQL, SQL Server, Sybase, and other SQL databases directly from your design.
List: \$2495 Ours: \$2246
FAXcetera #: 2666-0003 Return: N

ERwin/SQL 2.0

Logic Works
A powerful Entity-Relationship (ER) logical data modeling tool under Windows or Macintosh. Supports: entity, attribute, and relationship definition; primary and foreign key identification; referential integrity constraints; business rules; inversion entries; foreign and alternate key entries. Transforms logical model into physical schema and generates SQL DDL scripts for many relational systems, including DB2, Ingres, ORACLE, SQLBase, SQLServer, and Sybase. Produces presentation quality graphic diagrams. Affordable and easy to learn and use.
List: \$995 Ours: \$896
FAXcetera #: 2666-0001 Return: N

FirstSQL - RDBMS 2.0

FFE Software, Inc.
FirstSQL is an implementation of ANSI standard SQL with DB2 extensions. FirstSQL's 4GL programming language allow developers to use dBASE files or SQL relations stored with FirstSQL's own file structures. One of FirstSQL's extensions to standard SQL includes the ability to freely intermix 4GL and SQL statements. FirstSQL's 4GL is a complete applications development environment with integrated windowing capabilities. Also offers support for referential integrity and an implementation of the three-value logic proposed by E.F. Codd, including the MAYBE operator, which solves the EXIST problem. The NULL keyword is bolstered by support for MISSING and UNKNOWN. FirstSQL runs in 512K. Network Version available.
List: \$495 Ours: \$446
FAXcetera #: 1794-0018 Return: N

RaSQL/B 6.0

Pinnacle Publishing, Inc.
RaSQL/B gives the Clipper or FoxPro programmer access to the world of Btrieve data files. Using this library, you can access both Btrieve files and dbf files in the same applications and transfer data between them. You can use Clipper-like commands (n_xuse, n_xskip, n_xgototop, etc.) to access Btrieve data. RaSQL allows access to the data of many commercial packages that use the Btrieve file format. There are also conversion utilities to move Clipper or FoxPro data to this more efficient method of data storage.
List: \$349 Ours: \$314
for FoxPro List: \$299 Ours: \$269
FAXcetera #: 1794-0018 Return: O
Full 60 day guarantee.

ProPrint Report and C Code Generator

Use ProPrint to quickly create any type of report from dBASE, PARADOX, Btrieve, and ASCII data file formats.

Easy to learn, easy to use. ProPrint provides a consistent method of reporting from a number of database formats. Using a full screen, menu driven user interface, anyone can create reports which can be viewed on screen, or output to a printer or disk data file. Establish 1-to-1 and 1-to-many file relationships between any of the supported file formats. Powerful record selection and sequencing on any fields in a file. Record grouping for up to 4 levels and final totals. Many data types supported. Customize font and printer support. Box drawing mode. Complete set of powerful functions for creating user defined sub-routines to perform math and string operations, nested decision logic, loop structures, and much more...

Use the C Code Generator and your favorite C compiler to instantly create a stand alone executable (.EXE) for any ProPrint report application. (Significantly increases execution speed).

**Price: ProPrint Report Generator \$189
C Code Generator option \$219**

CONQUEST
DATA SYSTEMS

CALL OR WRITE TODAY!

9 Hemlock Court, Hamilton, NJ 08619-4627 (609) 586-1681

TURN TO PAGE 75 FOR RETURN POLICY DETAILS.

DOS DEVELOPMENT SOFTWARE

RaSQL/X 6.0

Pinnacle Publishing, Inc.

With RaSQL/X, Clipper programmers can finally enter the world of true Client/Server processing. Using the SQL language, your programs can tie into Novell's Netware SQL. This database server supports a complete set of the SQL language. Since RaSQL is implemented as a library, you can access both Netware SQL database files and regular Clipper dbf fields and move information between them. The emphasis in this product is to provide both the full benefits of a client/server system with the feel of the regular Clipper language.

List: \$349 Ours: \$314
for FoxPro List: \$299 Ours: \$269
FAXcetera #: 1794-0018 Return: O
Full 60 day guarantee.

TRANSLATORS/BRIDGES

Data Transfer Utility 1.1

IntelligenceWare, Inc.

A powerful and flexible tool to enable you to convert database from and to several database formats including, ASCII, SQL, dBASE, Lotus, and Hypertext. DTU may be used as either a DOS or a Windows based application.

List: CALL Ours: CALL
FAXcetera #: 1798-0010 Return: N

CLIPWKS 1.0

Grumpfish, Inc.

CLIPWKS enables you to translate Lotus or Quattro spreadsheets to database without bloating your executable file. Reading in the contents of an entire spreadsheet requires only 10K of overhead, and writing on a separate spreadsheet requires only 7K. CLIPWKS is the only Clipper add-on product that supports Lotus 3.x, Quattro, and Quattro Pro spreadsheets. (Also supports Lotus 2.x). CLIPWKS features both high level and low level functionality. Its "metafunctions" allow the developer to read and write spreadsheets with one function call.

List: \$199 Ours: \$179
FAXcetera #: 2409-0003 Return: L

UTILITIES

Banalyze 2.0

Information Architects, Inc.

B analyze is a powerful Btrieve application debugger. It intercepts calls to the Btrieve record manager and displays the parameters and buffers in a pop-up window. Since it is a TSR (19K), Banalyze will monitor Btrieve. Call from applications written in any language. Trap Btrieve call by file before, after, or only those returning errors. Pertinent information can be logged to disk for viewing at a later time. Also debugs the Btrieve access of XQL/NetWare SQL programs.

List: \$99 Ours: \$90
FAXcetera #: 2390-0001 Return: F

Bcheck 2.0

Information Architects, Inc.

Bcheck analyzes Btrieve file structures for damaged indexes and/or data. Produces a Btrieve Damage Assessment (BDA) report. Price includes free analysis by technician.

List: \$99 Ours: \$90
FAXcetera #: 2390-0002 Return: F

Bcreate 1.0

Information Architects, Inc.

Bcreate uses menus and dialog boxes to easily and quickly define Btrieve files. The parameters and index structures of existing files can be displayed, modified, or printed. ASCII description files compatible with Novell's BUTIL program can be generated. All the rules are programmed in to reduce the need for a manual.

List: \$29 Ours: \$25
FAXcetera #: 2390-0003 Return: F

Bedit 2.1

Information Architects, Inc.

Bedit is a utility for users of Novell's Btrieve record manager. It will display any Btrieve file or XQL/NetWare SQL table. Data can be displayed in ASCII, hex, or 3-D (Dictionary Driven Display). Records can be updated or inserted using the 3-D format. Records can selectively copied between Btrieve files, deleted, or saved to a DOS ASCII file. Export records in SDF (comma-delimited) format for import to Lotus, dBASE, PC Write, etc. Build test files from production data in minutes using the clone and copy function.

List: \$99 Ours: \$90
FAXcetera #: 2390-0004 Return: F

Brun 2.0

Information Architects, Inc.

Brun is essentially a replacement for the Btrieve BUTIL program. The three major advantages to Brun are: Run-time License, C source code included, and additional utilities to recover data. Brun is divided into 16 separate programs for simplicity and speed. Brun will clone existing files, repair damaged file headers, save/load data to/from ASCII files, copy records between files, and check Btrieve file integrity. Manual with extensive instructions on data recovery ins included.

List: \$189 Ours: \$169
FAXcetera #: 2390-0005 Return: F

Xsupport for DOS/Xsupport for Windows

Information Architects, Inc.

Xsupport is a database administration tool for Novell's XQL/NetWare SQL data dictionaries. Create tables (Btrieve) files, or modify existing data structures. All parameters for underlying Btrieve files are supported. Document Btable and view information to file or printer. Builds Btrieve/XQL dictionaries compatible with Object Vision, R&R, Forest & Trees, and Novell's Xtrieve. XQL not required. Single-user DOS and Windows 3.0 database interface included. Great Btrieve Utility. Versions for DOS test and Windows 3.0.

List: \$149 Ours: \$135
FAXcetera #: 2390-0006 Return: F

See page 176 for

FAXcetera®

instruncions.

ADDITIONAL PRODUCTS

Clarion LEM Maker 1.0

Clarion Software

A collection of tools that help you create Language Extension Modules for Clarion programs using Borland International's Turbo C Compiler and libraries. It contains three components: LM, CLA, LM.LIB, and MATRIX/DSPFILE. You can use any assembler that is source code compatible with Microsoft's MASM.

List: \$199 Ours: \$179
FAXcetera #: 1862-0008 Return: L

dSALVAGE 1.44

Comtech Publishing Ltd.

Diagnoses, repairs and edits DBF data files. It is menu and prompt driven. dSALVAGE features include: check the file and tell you how it is damaged; automatically fix the damage with a few keystrokes; and recover ZAP'd files with one keystroke. dSALVAGE contains header/record/byte-stream editors that allow you to search, modify and move data in ways not possible from within dBASE nor with any conventional editor. Supports dBASE (all versions), FoxBASE, dBase.

List: \$100 Ours: \$90
FAXcetera #: 2252-0001 Return: F

dSALVAGE PROFESSIONAL 3.0

Comtech Publishing Ltd.

Adds to dSALVAGE's diagnose/repair/edit features: command-line diagnostics; faster repairs of large data files with scattered damage; enhanced unZAP; header builder; hex/ASCII editor; Clipper, Foreign Language, and Extended ASCII Characters switches; compatibility with large disk partitions. It comes bundled

with Diskminder sector editor. Is compatible with all versions of dBASE, FoxPro, FoxBASE, Clipper, and any data files that conform to the DBF file standard. PC WORLD's Best Buy, Data Based Advisor and DBMS Magazine's Readers' Choice.

List: \$200 Ours: \$185
FAXcetera #: 2252-0002 Return: F

DVT: Data Visualization Tool 1.1

IntelligenceWare, Inc.

A database visualization program that analyzes large databases, extracts their shape, and graphically displays them. It selects graph types based on its analysis of each field type and the characteristics of the data items. DVT graphs large databases by distilling the shape of the data through a special set of data extraction algorithms.

List: \$490 Ours: \$441
FAXcetera #: 1798-0005 Return: N

RaSQL/X 5.2

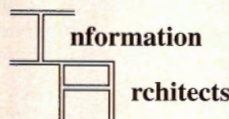
Pinnacle Publishing, Inc.

With RaSQL/X, Clipper or FoxPro programmers can finally enter the world of true client/server processing. Using the SQL language, your programs can tie into Novell's Netware SQL. This database server supports a complete set of the SQL language. Since RaSQL is implemented as a library, you can access both Netware SQL database fields and regular Clipper or FoxPro dbf fields and move information between them. The emphasis in this product is to provide both the full benefits of a client/server system with the feel of regular Clipper or FoxPro language. Specify: Clipper or FoxPro version.

List: \$349 Ours: \$314
FAXcetera #: 1794-0012 Return: O
Full 60 day guarantee.

Bsupport® for Btrieve®

- Bedit** - view & edit Btrieve files
- Banalyze** - Btrieve application debugger
- Brun** - BUTIL replacement
 - Run-Time License
 - C Source Code
 - Additional Functions
 - DOS, OS/2 Protected Mode
- Bcreate** - Btrieve® file creation utility
- Bcheck** - diagnose data problems



(800) 359-2721
(517) 887-8000
(517) 887-2366 FAX
(517) 887-8018 BBS

Free brochures and demo disks

Xsupport for NetWare XQL

Database Administration Tool for NetWare SQL and SQL.
Windows 3.x and DOS text versions.
Supports Object Vision, R&R, etc.
Xport - Import/Export data in SDF, CDF, and dBASE III. Source included.



DOS DEVELOPMENT SOFTWARE

DEBUGGERS

CodeWatch 5.0

Liant Software Corporation

A window-based source-level debugger that operates with all of Liant's compilers. Using CodeWatch, the user interacts in the conventions and symbols of the source language, not the machine language. The window interface makes debugging sessions very efficient by displaying the user's source program and program output simultaneously, while allowing user interaction with the debugger either by entering commands or by using pulldown menus and dialogs. Depending on the environment, the user may choose either a graphical-based interface or a character-based interface. CodeWatch's graphical-based interface uses all the capabilities of the powerful Motif user interface and X windows.

List: \$795 Ours: \$679
FAXcetera #: 1952-0016 Return: F

FlashView

FlashTek, Inc.

Full 32-bit source level debugging for C++, C and assembler programs with proper C++ naming. Unlimited number of breakpoints and trace points. Configurable multiple text Window UI with full mouse support. Full access to all variables, memory, registers, classes, structures, pointers, etc. Record source lines and variables in a history buffer for those hard-to-analyze logic bugs. Run-time memory protection scheme to isolate pointer bugs. Supports dual-monitor debugging. Execution time recording for timing analyses.

List: \$250 Ours: \$215
FAXcetera #: 1002-9203 Return: F

MultiScope Debuggers for DOS for Borland C++ 2.0

Symantec Corporation

The MultiScope Debuggers for DOS for Borland provide full support for C++ debugging. Its features include: full support for C++ type display and expression evaluation, class browser window, the CommandBar for frequently executed debugging commands, character mode/Windows user interfaces with dual monitor option, Crash Analyzer System for after-the-fact debugging, LAN and serial remote debuggers, 16 different program views, shows complex data structures graphically. Supports Borland C++ 3.0 and 3.1, Turbo Pascal 6.0, and Turbo Assembler. Windows user interface requires MS Windows 3.x. Not available to customers in France.

List: \$179 Ours: CALL
FAXcetera #: 2575-0003 Return: F

MultiScope Debuggers for DOS for Microsoft C/C++ 7.0 2.0

Symantec Corporation

The MultiScope Debuggers for DOS for Microsoft C/C++ 7.0 provide full support for C++ debugging. Its features include: full support for C++ type display and expression evaluation, class browser window, P-mode/Windows user interfaces with dual monitor option. Crash Analyzer System for after-the-fact debugging, LAN and serial remote debuggers, 16 different program views, shows complex data structures graphically. Supports Microsoft C/C++ 7.0. Windows user interface requires MS Windows 3.x. Not available to customers in France.

List: \$179 Ours: CALL
FAXcetera #: 2575-0004 Return: F

Periscope/EM

The Periscope Company, Inc.

A professional software only debugging solution that runs in extended memory, where it is write-protected and out of the lower 640K. This allows for source-level debugging of TSRs, device drivers, interrupt-driven programs, even add-in ROM and ROM BIOS. Offers a software only solution to the programmer's dilemma of needing all the base of 640K. This debugger runs out of extended memory when used with Qualitas' 386MAX and BlueMAX or Helix's NETROOM memory manager. The supporting memory managers also write-protect the memory used by the debugger so the debugger is safe from being overwritten by a runaway program. Fast because it runs from 32-bit extended memory; it doesn't use conventional memory that the program being debugged may need; it's protected from being corrupted; and it provides crash recovery via the break-out switch.

List: \$295 Ours: \$266
FAXcetera #: 1576-0005 Return: F

Periscope Model II, II-X 5.2 (STD)

The Periscope Company, Inc.

Full-function debugger with symbols and source-level support for most Microsoft and Borland languages. Pulldown menus, dual monitor support, 386 debug register support, hot keys, user exits, and much more. Works on PC's and PS/2's. Includes break-out switch enabling recovery from a hung system. No board required.

Model II List: \$225 Ours: \$203
Model II-X List: \$195 Ours: \$176
FAXcetera #: 1576-0002 Return: O
May charge up to 15% restocking fee on returns (must be within 30 days).



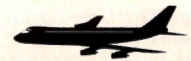
We
ship

Worldwide!

Periscope Model IV 5.2 (EM)

The Periscope Company, Inc.

Full-function hardware-assisted debugger. Software supports symbols and source-level debugging of most Microsoft and Borland languages. Break-out switch enables recovery from a hung system. Board's hardware breakpoints and hardware trace buffer provide real-time capabilities: to trap memory and port reads/writes/executes without slowing execution, and to record exactly what has occurred in real-time, including hardware interrupts. Works on 286's, 386's, and 486's running up to 33MHz. CPU specific Pod is required. Plus board (optional) keeps Periscope from using any lower 640K. Software same as Periscope/EM. List: \$1195-\$2795 Ours: CALL
FAXcetera #: 1576-0004 Return: O
May charge up to 15% restocking fee on returns (must be within 30 days).



C-Clearly® C & C++ Source Code Formatter

Confusing Code?

```
#include <stdio.h>
text_count() /* count lines, words, and characters */
{
    int c, nlines, nwords, nchars, inword;
    inword=NO; nlines=nwords=nchars=0; while((c
    =getchar())!=EOF){++nchars; if (c=='\n')
    ++nlines; if ((c==' ')||(c=='\n'))inword=NO; else
    if(inword==NO){inword=YES; ++nwords;} printf(
    "%d %d %d\n", nlines, nwords, nchars);}
}
```

C It Your Way!

```
#include <stdio.h>

text_count () /* count lines, words, and characters */
{
    int c, nlines, nwords, nchars, inword;

    inword = NO;
    nlines = nwords = nchars = 0;
    while ((c = getchar()) != EOF) {
        ++nchars;
        if (c == '\n')
            ++nlines;
        if ((c == ' ') || (c == '\n'))
            inword=NO;
        else if (inword == NO) {
            inword = YES;
            ++nwords;
        }
    }
    printf ("%d %d %d\n", nlines, nwords, nchars);
}
```

(Just one of an infinite number of styles.)

AUTOMATICALLY FORMATS C AND C++ source code exactly the way you want it. C-Clearly's context sensitive analysis will format any C or C++ program in your own personal or corporate style.

C-CLEARLY'S STYLE TEMPLATES are a snap to modify, since they resemble the C source code you edit into your preferred format. Templates are included for several common styles as well as standard K & R.

READING LISTINGS IS EASIER because they are created with function names and comments highlighted. Listing options include line numbers, flow lines, and headers & footers.

MAKES OBTUSE CODE CLEAR. Allows all of your source code to be presented in a consistent format of your choosing. Also great for code walk-through and final documentation listings.

WORKS with all IBM PC, XT, AT, PS/2 and compatibles, with 512K RAM, PC or MS-DOS. Automatically processes all include files and preprocessor statements. ANSI-C compatible.



V COMMUNICATIONS

4320 Stevens Creek Blvd., Suite 275
San Jose, CA 95129 fax 408-296-4224
408-296-4224 or 800-648-8266

DOS DEVELOPMENT SOFTWARE

DOCUMENTATION FLOWCHARTING

all CLEAR 1.1

Clear Software

Automatically creates presentation quality flowcharts, treacharts, procedure diagrams, decision trees, and org charts from plain English descriptions. Multi-page diagrams, user-definable symbols, text centering, and more. Import files from any word processor or Lotus work sheets. Output to screen, printers, PostScript, and desktop publishing systems.

List: \$300 Ours: \$269

FAXcetera #: 1853-0002 Return: F

C-Clearly 1.7

V Communications, Inc.

C context sensitive analysis formats any C program in your exact personal or corporate style. Easy to modify C-like templates are included for several common styles and standard K & R. Listings can also be created with optional highlights, line numbers, flow lines, and headers and footers. Automatically processes include files and pre-processor statements. ANSI-C compatible.

List: \$130 Ours: \$117

FAXcetera #: 1828-0005 Return: F

C-DOC Documentation Tools 5.0

Software Blacksmiths, Inc.

Automated Documentation of C and C++ programs. C-DOC is a set of easy-to-use tools which need no source code changes, and which produce ASCII output files suitable for any printer or word processor. These tools save hours of documentation and debugging since they produce clear and accurate documentation automatically. C-DOC is a single

program which is a fully-integrated version of the 5 component programs: C-CALL; C-METRIC; C-REF; C-LIST; and C-CMT (each described below). The C-DOC program comes with both a DOS and a protected-mode OS/2 version (the 5 component programs only come as DOS versions).

List: \$189 Ours: \$149

FAXcetera #: 2296-0001 Return: L

C-DOC Professional 1.0

Software Blacksmiths, Inc.

Software Blacksmiths C-DOC Professional Documentation Tools. This has all the same features as C-DOC, but includes a Hard Disk based version of the program for processing very large programs (up to 150,00 lines) as well as an OS/2 protected mode version of the program and a Windows 3.x version of the program! It also includes a 2-part C-Doc which generates an internal data-base which can then be used to generate whichever final reports are desired. C-DOC Professional also includes an enhanced 3-ring binder/case documentation package.

List: \$299 Ours: \$269

FAXcetera #: 2296-0007 Return: F

C-CALL Caller/Called Functions 5.0

Software Blacksmiths, Inc.

Produces a graphic "tree diagram" to show the caller/called hierarchy of functions within a collection of "C" or "C++" files. It also produces a function-versus-files table of contents, and creates various summary or detailed cross-references of function definitions and usage.

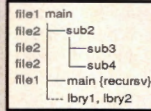
List: \$69 Ours: \$62

FAXcetera #: 2296-0003 Return: L

C AND C++ DOCUMENTATION

C-METRIC™ (\$59) COMPLEXITY / QUALITY

- Calculates "cyclomatic" path complexity for functions and system
- Counts lines with comments, code, and 'C' statements

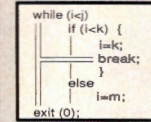


C-CALL™ (\$69) FUNCTION HIERARCHY

- Tree-Diagram showing function hierarchy
- Table-Of-Contents of functions versus files
- Summary and detailed cross-reference of functions

C-CMT™ (\$69) FUNCTION COMMENT

- Generates and inserts function comment blocks
- Can be re-run to update the comment blocks
- Retains any user-generated comments



C-LIST™ (\$69) LISTS OR REFORMATS

- Action-Diagrams show logic/control flow
- Optional line numbers, page numbers, and titles
- Reformats source to various standardized formats

C-REF™ (\$59) CROSS-REFERENCES IDENTIFIERS

- Local/parameter/global/define summary or cross-reference
- Produces class-hierarchy tree-diagram for C++ classes

SPECIAL: (\$199) C-DOC™ DOS Package (\$325 Value)

- All 5 programs fully integrated as 1 overall C-DOC program
- Processes multiple directories/files up to 15,000 total lines
- Unconditional 30-day money-back guarantee of satisfaction

NEW: C-DOC™ Professional (\$299): DOS, OS/2, Windows

- Processes 150,000 lines, 3-ring binder/case, 2-pass deferred reports

!! NEW 5.0 !! Point-and-click G.U.I. operation !!

SOFTWARE BLACKSMITHS INC

6064 St Ives Way, Mississauga
ONT Canada L5N-4M1

Voice/Fax: (416)-858-4466
Demo/BBS: (416)-858-1916

Some of the 30+ Tools from the C Programmer's Toolbox

CLint™ Syntactically checks one or more of your C source code files & generates ANSI function prototypes. Use this to find those latent programming bugs!

CFlow™ Shows how a program is organized, what is in the runtime library, and draws function graphs. Quickly shows you function hierarchy and function/file inter-dependencies.

CPrint™ Reformats and beautifies your C and C++ source code. Makes code easy to read and ends disputes on source code formats.

CXref™ Cross references and checks usage of up to 18 different classes of symbols in your C and C++ source code. Cross references any size program and number of listings.

CritPath™ Determines a program's critical path. Helps you improve your program's performance. (PC-DOS only)

COdecl™ Translates C and C++ declaration statements to and from English. Helps you decipher those complicated C variable declarations and construct new ones.

CHill™ Highlights and prints your C and C++ source code. Great for creating your final documentation. (MPW only)

Cpp™ Preprocesses C and C++ source code files that have ANSI macro definitions. Helps you port ANSI C code to/from your target environment.



Works with ANSI C, Apple MPW C and C++, Borland C++, Microsoft C/C++, Symantec THINK C, UNIX C, Zortech C++, ...

New Release

C & C++ Tools

New Edition

New 3.0 Release

- More C++ support
- New PC Commando interactive dialogs for quick and easy argument selection
- New support for default and unlimited arguments
- More options, new features and new reports...

New PC 386 Extended Memory Edition

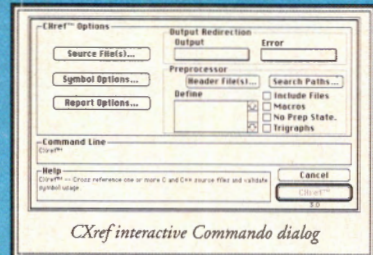
A collection of our most popular tools (CFlow, CLint, CXref, ...) can now utilize up to 32Mb of physical memory for blazing speed and the support of HUGE programs.

New PC Professional Edition

With both PC V123 (30+ tools) and the new 386 Extended Memory Edition, the Professional Edition makes for a powerful combination that can handle most of your C and C++ programming and supports needs.

If you do new code development, software maintenance, documentation, code porting or third party code/library integration, we have the best tools to improve your productivity and the quality and performance of your code.

Call us for your free detailed product brochure with sample report outputs and demo disk.



Order Hotline:

(510) 770-0858

Fax: (510) 770-0116

Visa and MasterCard accepted.



The C/C++ Tool Specialists™

PO Box 360845, Milpitas, CA, 95036
24-hour BBS: (510) 770-9763
30 day money back guarantee

DOS DEVELOPMENT SOFTWARE

C-CMT Comment Blocks 5.0

Software Blacksmiths, Inc.

Creates a "comment block" for each function, showing the function and identifier usage within each function. It can automatically, at the beginning of each individual function, insert these comment-blocks back into the source code. It can then be re-run, at a later date, and will update its comment-blocks (while leaving any user-generated comments alone).

List: \$69 Ours: \$62
FAXcetera #: 2296-0003 Return: L

C-LIST Source List or Reformat 5.0

Software Blacksmiths, Inc.

Lists programs with optional page titles and/or line numbers. It creates graphic "action-diagrams" of the logic/control structure within functions, and can reformat source programs into standardized formats.

List: \$69 Ours: \$62
FAXcetera #: 2296-0006 Return: L

C-METRIC Complexity/Quality Tool 5.0

Software Blacksmiths, Inc.

NEW! Calculates the path "cyclomatic" complexity for each function, and counts the number of: lines; "C" statements; code lines; complexity; and comments (for each function, and for the system as a whole).

List: \$59 Ours: \$53
FAXcetera #: 2296-0004 Return: L

C-REF Identifier Cross-Reference 5.0

Software Blacksmiths, Inc.

Creates various summary or detailed cross-references of: local; global; define; and parameter usage. It also creates a class-hierarchy "tree-diagram" for C++ classes.

List: \$59 Ours: \$53
FAXcetera #: 2296-0005 Return: L

C Programmer's Toolbox™/PC Volume 1 3.0

MMC AD Systems

Volume 1 contains 12 tools that work with Microsoft C, Borland C++, ANSI C. These tools will reformat your source code into your programming style, determine and graph program functions and determine file organization and hierarchy, identify unused functions and runtime library usage, profile program execution including BIOS interrupts and DOS system call usage, 'dump' files and more.

List: \$125 Ours: \$113
FAXcetera #: 0021-6901 Return: F

C Programmer's Toolbox™/PC Volume 2 3.0

MMC AD Systems

Volume 2 adds 9 more tools for C and C++ that will identify latent programming bugs such as uninitialized local and global variables, bad call sequences, misplaced punctuation and assignment and conditional operator mix-ups (lint); generate function prototype files, cross reference and check symbol usage across ANY number of files, determine a program's critical execution path, difference text files, locate lost files and more.

List: \$125 Ours: \$113
FAXcetera #: 0021-6903 Return: F

C Programmer's Toolbox™/PC Volume 3 3.0

MMC AD Systems

Volume 3 adds 12 more tools for all types of programming environments including C and C++. The tools include a C/C++ declaration statement translator to and from English, a C/C++ preprocessor that is also ANSI compliant, file/directory/device archiving with the industry's best compression rate and royalty free distribution, file/directory/program aliasing (Unix style symbolic links) that is Windows 3.x compatible and more.

List: \$125 Ours: \$113
FAXcetera #: 0021-6904 Return: F

C Programmer's Toolbox™/PC Programmer's Toolbox™/PC (Any 2 Volumes, or all three)

MMC AD Systems

Provides a variety of tools that supports the software development process including: software analysis, software modification and test, performance analysis and documentation. Enables you to select any two PC volumes from the Toolbox for C, C++ or any other type of product development and support.

Any two List: \$225 Ours: \$199
All three List: \$300 Ours: \$270
FAXcetera #: 0021-6904 Return: F

C Programmer's Toolbox™/PC 386 Extended Memory Edition 3.0

MMC AD Systems

Quickly analyze, cross reference and/or semantically check HUGE programs in up to 32 MB of physical memory on your 386/486/... systems. Or, search for complex strings throughout your disk, system and/or network.

List: \$225 Ours: \$199
FAXcetera #: 0021-6905 Return: F

C Programmer's Toolbox™/PC Professional Edition 3.0

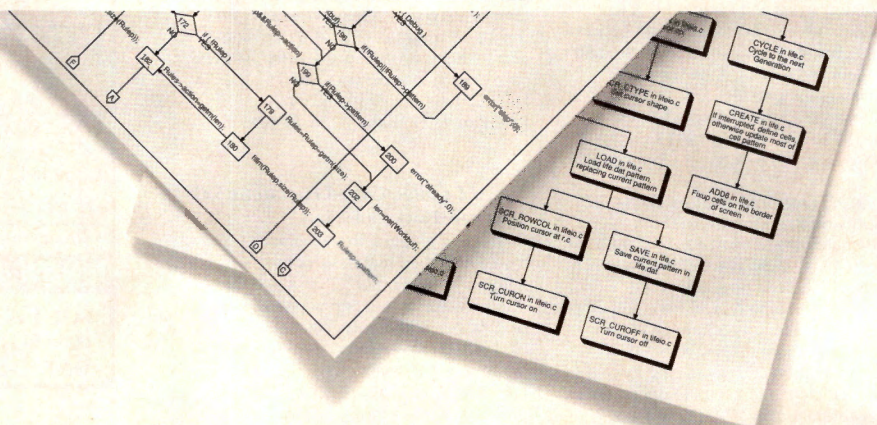
MMC AD Systems

With both the C Programmer's Toolbox/PC Volumes 1,2 and 3 and the 386 Extended Memory Edition, The Professional Edition makes for a powerful combination that can handle most of your C and C++ software engineering/re-engineering and documentation needs.

List: \$395 Ours: \$359
FAXcetera #: 0021-6906 Return: F



For the latest in software news
read Industry Currents
on pages 11 & 12.



The Critics Won't Leave Us Alone.

John Dvorak called it "Just what the doctor ordered." Adam Green said "It's every developer's dream come true." Bob Alonso wrote "It can save days of reading listings and of taking guesses." C Gazette agreed: "If you're maintaining spaghetti code, CLEAR amply fits the bill." and that's just a sampling of the praise and awards heaped onto CLEAR. Why?



Simple. Because it's the only developer's tool that lets you take any piece of C code — whether you wrote it yourself, inherited it or bought it from a vendor — and with the stroke of a key, automatically display and print a complete flow chart or tree chart.

Charts that show you, with absolute accuracy the logic and flow of any C application. No matter how big, old or complex it is. And do it with a robust set of flexible options and features. Like zooming and rotation of its WYSIWYG display. Program flow simulation, formatted source listings, function cross references and prototype files. Three preprocessor options, detail level control, and more.

Imagine the time you'll save designing, documenting and debugging applications. Applications made all the more valuable — to your company or your customers — because they're fully documented and infinitely supportable. Thanks to CLEAR™.

CLEAR for C is \$199.95*. Order today to find out for yourself why CLEAR is one of the most decorated developer's aids in history.

1-800-338-1759

In MA 617-965-6755, Fax 617-965-5310

CLEAR Software, Inc. 385 Elliot Street, Newton, MA 02164

CLEAR supports all ANSI and generic C compilers (all versions of Turbo C™, Microsoft C®, Quick C®, etc.) Requires IBM PC or compatible: DOS 3.0 or higher, 512K RAM: CGA, EGA, VGA or Hercules graphics card for screen output. (CLEAR for dBASE® offers similar power to developer's using any dBASE language, and is also \$199.95.) Copyright © CLEAR 1991. *Plus \$5 S&H, \$15 abroad. MA residents add 5% sales tax.

Keep our number
at your
fingertips!



DOS DEVELOPMENT SOFTWARE

CLEAR for C 1.0

Clear Software

Helps C developers understand and document their code by automatically producing these high-resolution diagrams: program flow charts, multi-level tree charts, formatted source listings, function cross references, and prototype files. While it processes C applications, it analyzes program's logic and reports logical inconsistencies and syntactical errors. Supports Microsoft C, Turbo C, and any generic C compiler.

List: \$199 Ours: \$175
FAXcetera #: 1853-0001 Return: F

Code Craft 3.0

Fabian Software, Inc.

Code Craft is the only tool that can create, revise, and print Nassi-Schneiderman charts interactively on the PC. Support and teaches top-down design and step-wise refinement. Convert charts into code modelled after C, COBOL, FORTRAN, PL/I. Define variables and statement blocks based on language model chosen. Has syntax checkers for C, PASCAL, and FORTRAN. Also supplies program prototypes. Great for designing, walk-throughs, and specs. Requires DOS 2.0 or higher, EGA adapter. Has an extensive help facility.

List: \$195 Ours: \$175
FAXcetera #: 1004-9601 Return: L

DOCmaker 1.1

Task Software

Automated documentation system. Create professional User Manuals up to five times faster! Manuals include Table of Contents, Index, Getting Started, Reference, Tutorials, Figures, and more! "Intelligent Text" writes up to 90% of the manual based on your logical system definition. Totally flexible and customizable. Laser fonts, PCX graphics. Mouse support, online help, pulldown menus.

List: \$200 Ours: \$179
FAXcetera #: 1004-9001 Return: F

EasyFlow 7

HavenTree Software Limited

A diagramming program dedicated to the fast creation and modification of flowcharts, data flow diagrams, org charts and a great many others. The program automates many functions including line route generation, centering of text in shapes, placement of text along lines, 3D (multi-level) charting, network compatibility (specific Novell support), full color support and over 270 output devices supported.

List: \$280 Ours: \$189
FAXcetera #: 0305-0001 Return: L

Flow Charting 3 2.0

Patton & Patton Software Corporation

Flow Charting 3 meets your need for a truly universal charting program. Its versatility allows you to easily create flowcharts, data flow diagrams, process control, and organizational charts. Place shapes, text, and lines anywhere on your page. Design your charts in portrait or landscape form. Other features include: multi-page charts, import/export capabilities, 300 dpi laser and 24-pin printer support, and international character support.

List: \$250 Ours: \$195
FAXcetera #: 2665-0001 Return: O
Satisfaction Guaranteed.

Source Print+ 5.0

Powerline Software, Inc.

Source Print+ is a utility for formatting, organizing, and cross referencing source code. As a source code formatter, Source Print+ outlines nested structures, automatically indents source code, numbers source lines, highlights desired keywords, and prints imbedded titles. Source Print+ can also produce a cross reference showing the hierarchy of function calls in three different levels of detail. Source Print+ can be run either through the command line or through the new Windows interface. Output is directed to a file, the screen or to any printer. Source Print+ is available for DOS/Windows in 5 versions: C/C++, Pascal/Modula-2, FORTRAN/BASIC, dBASE/Paradox/SQL, and the Deluxe Edition which supports all of these languages.

List: \$169 Ours: \$145
Deluxe Edition: List: \$249 Ours: \$215
FAXcetera #: 1543-0001 Return: O
Full 60 Day Guarantee.

ManualWriter 1.0

Kedwell Software, Inc.

Creates your manual by documenting the functionality of each component of your application as you are designing it. Details all menus, sub-menus, forms, browses, reports and more down to the field level. Creates table of contents and indexes. Simply import ManualWriter's draft into your word processor for final editing. Requires Kedwell Software's DataBoss version 3.5.

List: \$249 Ours: \$224
FAXcetera #: 3758-0002 Return: F

DOS EXTENDERS

286 / DOS-Extender SDK 2.0

Phar Lap Software

Enables software developers to build 16-bit protected mode applications with Microsoft C, Borland C++, and Microsoft FORTRAN. Break the 640K DOS memory barrier and access up to 16 megabytes of memory. 286/DOS-Extender, which can be bound within the application, is invisible to the end user.

List: \$495 Ours: \$435
FAXcetera #: 1490-0010 Return: F

X-32VM

FlashTek, Inc.

X-32VM is the successor to the highly acclaimed "DOSX" 32-bit extender shipped with the Zortech C/C++. It now supports both Watcom and Zortech 32-bit compilers and includes a virtual memory option. It is supplied with a manual with complete documentation and example code. It is compatible with VCPI, DPML, and XMS. An optional source level debugger, FlashView, is also available. NO ROYALTIES.

List: \$69 Ours: \$62
FAXcetera #: 1002-9201 Return: F



EDITORS

BRIEF 3.1

Borland International

The best-selling editor for PC programmers features mouse support, EMS caching, redo and undo. Program faster and more productively with multiple windows, built-in support for 42 compilers, template editing, smart indenting, complete search/replace, total keyboard configurability, editable keystroke macros, C-like macro language with source-level debugger and more.

List: \$249 Ours: \$95
FAXcetera #: 1271-0001 Return: F

Cheetah 2.2

Software Science, Inc.

Full-featured programmer's editor to write, compile, link, and run applications from within the editor via hotkeys or a pulldown menu. Up to 500 files can be edited in windowed or full screen mode; complete editing features: block operations, keyboard macros, macro editor, source formatting, and printer support (background printing!). Language support for dBASE, Foxbase, Clipper QuickSilver, and Force. Errors detected by the compiler are highlighted in the source code. dBASE files can be created, browsed, and indexed internally in CHEETAH. Complete with mail-merge facility, pop-up calculator, ASCII chart, spell-checking, etc. Keyboard layout and color scheme are 100% configurable.

List: \$145 Ours: \$131
FAXcetera #: 1804-0003 Return: F

ED, The Programmer's Editor, for DOS 7.0

Lifeboat Software

Designed for professional and new users alike, ED, The Programmer's Editor, for DOS incorporates the best features found in other leading programmer's editors and much more. Key features include: built-in code support for C++, dBASE, Clipper, and Pascal; automatic code indenting and completion; unlimited undo and redo; keyboard macros and remapping; complete context-sensitive help; and simulation of popular editors (Brief, Wordstar, Qedit, Norton). Power users will appreciate the fast C extension language, LAN file locking, regular expression search, full support for rectangular Column blocks, and built-in compiler support with error tracking.

List: \$199 Ours: \$159
FAXcetera #: 0233-0011 Return: F

EDIX 8.0

Emerging Technology Consultants, Inc.

EDIX is a multiple-window, full-screen text editor. EDIX is available for DOS, OS/2, UNIX and VMS systems. The features which set EDIX apart from the rest include its uniform interface across machines and operating systems, sub-process execution with automatic output capture, compiler support, keystroke record and playback, a versatile search and translate capability, plus nearly unlimited potential for customization.

List: \$195 Ours: \$176
FAXcetera #: 1567-0001 Return: N

Evolve

American Cybernetics

Evolve is a wrap-around environment for Multi-Edit that understands a number of XBASE dialects including Clipper, FoxPro, dBASE and ARAGO. Features include: Enhanced Auto-Template Expansion and Smart indenting; Function writer; Code formatter; Function/Object Locator and Browser; View database structures, and instantly create comment blocks from them; Rmake interface; Auto-Brace matching and closure; Operator alignment; Block commenting and un-commenting; Source code Report Writer; Full on-line help; and more. Requires Multi-Edit 5.0 or later.

1 Dialect add-on List: \$79 Ours: \$72
All Dialects add-on List: \$129 Ours: \$115
1 w/Multi-Edit Std. List: \$179 Ours: \$159
w/Multi-Edit Pro. List: \$249 Ours: \$224
All w/Multi-Edit Std List: \$229 Ours: \$205
w/Multi-Edit Pro. List: \$299 Ours: \$255
FAXcetera #: 1846-0004 Return: F

Guide to C++

American Cybernetics

Guide to C++ is a complete, on-line, hypertext reference manual for Turbo C++. Integrates directly into the Multi-Edit hypertext system, or runs standalone with our TSR viewer. Context sensitivity allows you to pop-up help on the key word your cursor is on. Cut and Paste from the guides directly into your source! Also available in Norton Guides format. Multi-Edit or Norton Guides format:

List: \$40 Ours: \$35
Both formats: List: \$60 Ours: \$55
FAXcetera #: 1846-0003 Return: F

Guide to Pascal

American Cybernetics

Guide to Pascal is a complete, on-line, hypertext reference manual for Turbo Pascal 6.0. Integrates directly into the Multi-Edit hypertext system, or runs standalone with our TSR viewer. Context sensitivity allows you to pop-up help on the key word your cursor is on. Cut and Paste from the guides directly into your source! Also available in Norton Guides format. Multi-Edit or Norton Guides format:

List: \$20 Ours: \$20
Both formats: List: \$30 Ours: \$30
FAXcetera #: 1846-0008 Return: F

Hyper-Word 2.01

Zaron Software

Multi-window Hypertext word processor and development system. Instantly create interactive tutorials and reference systems. Includes context sensitive help, multi-level undo, pulldown menus. For the programmer; create program mock-ups, automatically display subroutine from any reference, interrelate all program source files. Full WYSIWYG word processing features. Mouse support.

List: \$149 Ours: \$135
FAXcetera #: 2868-0001 Return: F

KEDIT 4.0

Mansfield Software Group, Inc.

Powerful general purpose text editor compatible with XEDIT, IBM's VM/CMS text editor, also contains many PC-based editor features. Supports multiple files, multiple windows, block operations, sophisticated string search and change, DOS interface, macro language is either built-in subset of REXX or full REXX with Quercus Systems' Personal REXX or IBM's OS/2 REXX.

List: \$180 Ours: \$129
FAXcetera #: 1518-0001 Return: F

SEE PAGE 176

FOR FAXcetera®
INSTRUCTIONS

MKS VI 3.1

Mortice Kern Systems

Provides a complete implementation of the powerful UNIX System V full screen editor for use of your DOS system. Handles files of any size (limited only by available disk space) and performs fast screen updates. Allows you to use international character sets (such as German, French and Spanish) and create/edit text in many languages. Includes complete pattern matching for searching and substitution; complete undo; English-like syntax in command mode; mnemonic control sequences in visual mode; operations may be applied to characters, words, lines, sentences, paragraphs or the entire file; full macro capability; and c-tags for cross referencing of C programs. List: \$149 Ours: \$125 FAXcetera #: 1634-0006 Return: F

Multi-Edit Lite 1.0

American Cybernetics, Inc.

Multi-Edit Lite is a scaled down version of Multi-Edit Standard. Developed for environments where disk space may be a problem, (like your laptop), Multi-Edit Lite retains the same Keystroke Macro capabilities, mouse support, menus, multiple windows, dialog boxes and easy configuration as Multi-Edit Standard and Pro. Edit 25 files at a time; full Virtual Memory, (edit any size file); EMS/XMS support; edit within editor (swaps out to 2.5K); auto-error location for most compilers; loads FAST! List: \$79 Ours: \$69 FAXcetera #: 1846-0005 Return: F

Multi-Edit Professional 6.0

American Cybernetics, Inc.

Extended version of Multi-Edit Standard includes: Document Module containing Spellchecker (80K words, 2 auxiliary user dictionaries) & Print Formatter for advanced print functions; Communications Module provides for multiple ports & modem control; Source Code Module allows customization for all user interface & advanced feature macros plus source-level macro debugger & support for popular version control software packages; all seamlessly integrated. List: \$199 Ours: \$139 FAXcetera #: 1846-0001 Return: F

Multi-Edit Standard 6.0

American Cybernetics, Inc.

Fully configurable, intuitive ASCII text editor provides complete programming environment; reconfigure/compile within editor; powerful CMAC 'C-Like' macro language (MEMAC still supported); window edit up to 100 files (unlimited size); Binary & Unix file editing; SAA or 'Classic' interface style; USER MENU integrates all your tools; Real-time DOS output window; EMS/XMS support; unlimited keystroke macros; seamless mouse support; multi-directory DOS Shell; context-sensitive Hypertext help; cross-directory search; regular expression Search/Replace; extensive language support; undo up to 65K operations/full REDO; MORE! Free Demo. List: \$129 Ours: \$116 FAXcetera #: 1846-0002 Return: F

Multi-Tags 1.0

American Cybernetics, Inc.

Multi-Tags is a hypertext-style source code locator and browser for Multi-Edit. This add-on scans your source code and builds databases of functions, structures, types and objects (depending on language). While editing source code, you can place your cursor on any function name (or other supported language structure) and Multi-Tags will instantly locate the source file and position where the tag was defined. Features include: Tag Database Browser that lets you view, navigate through, and maintain your databases; Menu or Hot-Key driven (configurable); Batch operation, scans only files that have changed since the last scan; supports multiple tag databases; Databases may be separated by language or project, or both; currently supports C/C++, CMAC, Turbo-Pascal, ASM, Paradox, Quick-Pascal, Modula-2, dBASE, Clipper, and FoxBASE, more to come. Macro source code included. Requires Multi-Edit. List: \$30 Ours: \$25 FAXcetera #: 1846-0006 Return: F

The Norton Editor 2.0

Symantec

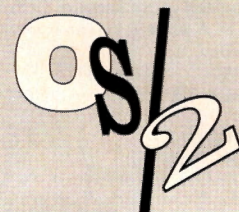
An inexpensive, full screen editor designed for creating and modifying ASCII files. Requires only 130K of memory but can edit files of any size. Second editor operates with just 50K of memory. This two-editor package offers a unique combination of power and flexibility for all user levels. List: \$99 Ours: \$74 FAXcetera #: 2132-0010 Return: F

SlickEdit 2.2

MicroEdge Inc.

Programmable editor including undo/redo, multiple windows, and multiple files up to 1 GB. Simultaneously edit Mac, UNIX, and DOS ASCII format files. Includes 450K of on-line help, multiple clipboards, compiler error message processing, procedure tagging, a typeless REXX-style macro language, a programmable file manager, and command retrieval as well as robust emulation for Brief and Epsilon (not just key reassignments.) Available for DOS, OS/2, MS Windows NT, SUN Sparc 4, SCO UNIX 386 and XENIX 386. All 5000 lines of macro source code are completely compatible across all platforms, and SLICK macros can be transferred between these platforms. List: \$195 Ours: \$149 FAXcetera #: 1997-0001 Return: F

Special Offers



See pages 39-41!

See pages 37 & 38 and 44-46 for informative articles on OS/2 2.0 as a platform for developing.

Take a Closer Look at

"Multi-Edit will convert programmers - Editing tools and easy configuration will surpass user expectations."

Nicholas Petreley, Info World, July 6, 1992

Multi-Edit Standard \$129

- Edit up to 128 DOS, UNIX or BINARY FILES of unlimited size!
- EMS/XMS Support! Swaps to just 3k!
- Regular Expression Search
- Cross directory, Multi-File search and replace!
- Unlimited UNDO and REDO!
- Real-Time DOS output window!
- 30/33/43/50 line display
- Ultravision support
- Alternate BRIEF or WordStar keymaps
- Line, Stream and Column blocks
- Programmer's Calculator, text ruler, ASCII chart and Notebook!
- Auto-save and auto-backup
- Smart indenting, syntax highlighting, construct matching and template expansion for ASM, BASIC, C, C++, COBOL, Fortran, Modula-2, Pascal, XBase and more!
- Supports more than 60 different compilers!
- Unlimited keystroke macros!
- Condensed display model
- Context-sensitive Hypertext help
- Multi-Directory file manager!
- C-Like macro language!
- Much More!

Multi-Edit Professional \$199

Advanced document formatter; spellchecker; communications; macro debugger; system macros source code; VCS support.

Multi-Edit is not just an editor, but a complete development environment! The flexible compiler/linker/make interface and user-definable menus let you interface ALL OF YOUR TOOLS into one, seamless work place!

Multi-Edit's easy customization, intuitive user interface, language sensitivity, mouse support, macro language and sheer power combine to provide you with unparalleled productivity. You will find freedom and flexibility that you just do not get from IDEs or other programmer's editors.

Call or Fax Now - Free Demo Disk!

Tel: 1-800-899-0100

Fax: (602) 966-1654



1830 W. University Drive, Suite 112
Tempe, Arizona 85281

"Almost every aspect of the editor shows a deep understanding of programming needs. This meticulous design and intuitive construction make Multi-Edit just about the finest text editor not only in DOS but on most any platform."

Andrew Binstock, Computer Language, July 1992

SPF/PC

Command Technology Corporation
Functionally equivalent to the text editing capabilities of ISPF/PDF on the IBM mainframe with true split screen; directory/member lists; on-line, context-sensitive HELP; command stacking; and HEX display for both BROWSE and EDIT. Additional features include instantaneous response time, 43-line-EGA/50-line VGA support, cursor scrolling, LAN compatibility, binary file editing, large file support, and access to 48 PF keys.
List: \$295 Ours: \$266
FAXcetera #: 1533-0001 Return: L

SPF/2

Command Technology Corporation
Functionally equivalent to the text editing capabilities of ISPF/PDF on the IBM mainframe. Features 3270 compatibility, macro interface to OS/2's REXX, ASCII or EBCDIC file editing, program comment highlighting, multi-directory file section lists with text searching capabilities, large file editing and CUT and PASTE using PM clipboard (OS/2 only).
List: \$295 Ours: \$266
FAXcetera #: 1533-0002 Return: L



VEDIT/VEDIT PLUS 2.04/3.50

Greenview Data, Inc.
Offers exceptional speed, small size (70K) and intuitive operation. Fully integrates compilers, assemblers, debuggers and MAKE tools. Automatically tracks syntax errors. Edit multiple files of unlimited size. Features include windows, pulldown menus, mouse support, Undo, configurable keyboard, search/replace with regular expressions, automatic indent and parentheses matching. Also word processing features and column operations. VEDIT PLUS adds macro programming.
VEDIT List: \$69 Ours: \$62
VEDIT PLUS List: \$185 Ours: \$119
FAXcetera #: 1020-0001 Return: F

Wylbur/AT 1.4

Adlersparre & Associates Inc.
A complete reproduction of the IBM mainframe version of WYLBUR. It provides the same edit environment for the MVS programmer, and provides all the text editing, and EXEC command language capabilities, as well as many enhancements. Many EXEC programs can be ported from the mainframe to the PC with little or no change. In addition, new features provide serial communication for automated script files, direct program execution under DOS, data entry panels, and indexed data base creation. Users who know WYLBUR on the mainframe already know Wylbur/AT.
List: \$199 Ours: \$179
FAXcetera #: 3253-0001 Return: F

See page 176 for
FAXcetera®
Instructions.

WANTED

MVS and COBOL PROGRAMMERS

We want you to try SPF/2® 2.0 in your workplace. It'll give you true ISPF/PDF compatibility on OS/2® or DOS-386. And that's not all. You'll have response time like you've never seen before, 100% availability, no connect-time charges, and more muscle to handle large files. And, SPF/2 integrates seamlessly with the Micro Focus® COBOL Workbench and AD/MVS®.

So go ahead. Try SPF/2.

NEW! Concurrent-Use Version
NEW! Corporate Licenses

Call 800-336-3320

CTC, 1040 Marina Village Pkwy.
Alameda, California 94501-1041

**30 day
Money-Back
Guarantee**

SPF/2 is a registered trademark of Command Technology Corporation. All other products are trademarks or registered trademarks of their respective companies.

EMBEDDED SYSTEMS

386/ASM/LinkLoc 4.0

Phar Lap Software
A complete 80x86 embedded development package. It has the components needed to build embedded systems: 386/ASM, a full-featured MASM compatible macro assembler; LinkLoc, a one-step linker/locator; and 386IDOS-Extender, a protected mode runtime environment which allows you to prototype and debug your software on a 386 PC. Also includes a full-featured librarian, tested for compatibility with many compilers and assemblers, including those from MS, MetaWare, Intel, Green Hills, Alslys and Telesoft.
List: \$1295 Ours: \$1166
FAXcetera #: 1490-0008 Return: F

Cross-16 Meta-Assembler V2.0

Universal Cross-Assemblers
A table based absolute cross-assembler using the manufacturer's mnemonics. Produces a listing and Intel, Motorola or binary hex file from an assembly language source file. Supports ALL of the processor families included in XDASM plus: 37700, 50740, ADSP-2100, NEC7500, PIC16C5x, TMS3201x, TMS370, TMS7000 and TMS9900. User configurable for other processors.
List: \$99 Ours: \$79
FAXcetera #: 2538-0002 Return: F

Cross-32 Macro

Meta-Assembler V2.0
Universal Cross-Assemblers
An enhanced version of Cross-16 with macro and conditional assembly. Supports ALL of the processor families included in XDASM and Cross-16 plus: 68HC16, 68000, 80186, 80C196, ADSP-2100, H8/300, H8/500, TMS3202x, TMS34010, Z80, Z8002 and more. User configurable for other processors.
List: \$199 Ours: \$159
FAXcetera #: 2538-0001 Return: F

Link&Locate 386 1.0

Systems & Software, Inc.
Supports building protected-mode programs for 286/386/486 embedded systems and 386/486 DOS-extender applications. Accepts object modules from MetaWare High C, MS C 6.0, and MS Macro Assembler. The linker generates executable files in OMF-286/386 boot-loadable format for downloading to source-level debuggers, in-circuit emulators, and PROM programmers. Includes SoftProbe 386/SIM, a 386/387 instruction-level simulator and source-level debugger.
List: \$795 Ours: \$716
FAXcetera #: 1665-0006 Return: F

Link&Locate++ Extended 6.0

Systems & Software, Inc.
Supports the development of large real-mode embedded systems applications with MS C and MASM 5.1 or 6.0. It generates executable code in Intel OMF-86 and absolute code in pure binary, Intel hex, or Tektronix extended hex format. Full flexibility and control of segment and group placement anywhere in physical memory. Includes start-up source code, floating-point support, & working examples.
List: \$479 Ours: \$431
FAXcetera #: 1665-0002 Return: F

Link&Locate++ for Borland 1.0

Systems & Software, Inc.
Links and builds real-mode embedded systems applications with Borland languages. It accepts object files from Borland, Pascal, C, C++, and Turbo Assembler. Generates executable code in Intel OMF-86 and absolute code in Intel hex and pure binary for PROM programming. Full flexibility and control of segment and group placement anywhere in physical memory. Includes object code librarian, code converter, start-up source, floating-point support, & working examples.
List: \$479 Ours: \$431
FAXcetera #: 1665-0001 Return: F

LinkLoc 4.0

Phar Lap Software
An embedded systems linker/locator for the Intel 8086/80286/80386 family of microprocessors. Designed to link software written in assembly or high-level languages such as C and Pascal, it produces executable image files which can be down-loaded to a variety of targets including in-circuit emulators, ROM-based debuggers, and PROM programmers. Available with or without Phar Lap 386/ASM on a variety of host computer systems, including the IBM PC, Sun and Apollo UNIX workstations, and the DEC VAX and Micro VAX systems.
List: \$795 Ours: \$715
FAXcetera #: 1490-0011 Return: F

SoftProbe 386/SIM 1.2

Systems & Software, Inc.
An instruction-level simulator and source-level debugger for 386/486 embedded systems development. Start debugging your 386/486 applications before your prototype hardware is available. Provides simulation for the 386 CPU (real/protected mode), 387 math coprocessor, timer, two interrupt controllers, I/O ports, & up to 4 GB physical memory. Debugs at source and assembly level using breakpoints, watchpoints, trace, profiling, and path coverage. Accepts OMF-86/286/386 formats.
List: \$595 Ours: \$536
FAXcetera #: 1665-0007 Return: F

SoftProbe 386/TX 1.0

Systems & Software, Inc.
A source-level remote target debugger for 386/486 embedded systems applications. Accepts executable files in OMF-86/286/386 boot-loadable formats and allows downloading programs from the host PC and debugging on the actual target system. Includes source code for the reconfigurable modules of the target monitor. The debugger has a multi-window user interface and concurrently displays registers, source, command dialog, and many more.
List: \$995 Ours: \$896
FAXcetera #: 1665-0005 Return: F

XDASM Cross-Disassembler 2.1

Universal Cross-Assemblers
Produces assembler ready source code for Cross-16/32 from an Intel, Motorola or binary hex file. Supports ALL of the: 180X, 3201X, 3870, 4004, 64180, 6502, 6800, 6805, 6809, 68HC11, 78C10, 8048, 8051, 8085, 8096, 89700, COP400, COP800, SUPER8, Z8, and Z80 processor families. User configurable for other 8-bit processors.
List: \$249 Ours: \$224
FAXcetera #: 2538-0003 Return: F

For return policy details, turn to page 75.

EXPERT SYSTEMS

Auto-Intelligence 2.0 IntelligenceWare, Inc.

Discover the decision making criteria used in your field by identifying rules based on your own weighting of attributes. Intelligent interviews make the process of capturing knowledge in structured decision-making areas systematic. Examples of such task include diagnosis, financial investments, loan approval, and risk analysis.

List: \$490 Ours: \$441
FAXcetera #: 1798-0006 Return: L

BestChoice3 3.0 Sterling Castle

Assists you or your team in any problem requiring alternative analysis. Useful for determining program design specification, features to incorporate, product evaluations, purchase considerations (equipment, property, stocks), personnel review, etc. Logical process, simple to learn and easy to use.

List: \$99 Ours: \$89
FAXcetera #: 1635-0006 Return: O
90 day money back guarantee

BrainMaker 2.5 California Scientific Software

BrainMaker finds hidden patterns in your data without using rules, learns by example, and makes forecasts from any kind of data. Complete neural network development system includes NetMaker data manager, tutorial and 8 sample networks. Imports Excel, Lotus, dBASE, ASCII & binary files. Up to 512 neurons per layer, up to 6 hidden layers. Runs on any PC or Mac. Includes User Guide and bonus text "Introduction to Neural Networks and Expert Systems". Specify PC or Mac. Easy upgrade to BrainMaker Pro.

List: \$195 Ours: \$175
FAXcetera #: 2163-0001 Return: F

BrainMaker Professional 2.5 California Scientific Software

Fully-featured professional version of BrainMaker (see above) includes full suite of automatic and semi-automatic development tools for network optimization. Supports over 25,000 independent variables, graphics output, high-speed Binary and Hypersonic training. Includes runtime license and source code sufficient to run trained neural network on any platform. Optional accelerator system means networks that once needed weeks now train in hours—3x CRAY-1 speed on your PC!

List: \$795 Ours: \$675
FAXcetera #: 2163-0002 Return: F

Expert Measure IntelligenceWare, Inc.

Evaluate the quality of your knowledge-base with a set of test cases in an interactive environment that allows the user to adjust the criteria used for judgement. Expert/Measure combines cost and frequency matrices to measure the level of "confusion" inherent in a decision support system avoiding costly "logical" errors.

List: \$490 Ours: \$441
FAXcetera #: 1798-0007 Return: L

Intelligence/Compiler 3.0 IntelligenceWare, Inc.

Develop multi-paradigm applications fast through a fully integrated, intelligent programming environment. Combine object orientation, user definable Dynamic Hypertext windows, rule-based programming, database management, and automatic interface generation to increase your productivity and make your applications fly fast.

List: \$490 Ours: \$446
FAXcetera #: 1798-0008 Return: L

KnowledgeMaker 1.0 Knowledge Garden Inc.

A powerful induction system which reads examples in text or LOTUS 1-2-3 files and creates rules. Output can be in English or the precise syntax required by KnowledgePro, Micro-Expert, insight 2+, M.1 or the system's own inference engine written in Borland's Turbo Prolog.

KnowledgeMaker was written in KnowledgePro, and is supplied with source code. KnowledgeMaker is both an expert system about creating rules from data and a tool with which to do it.

List: \$199 Ours: \$179
FAXcetera #: 1474-0004 Return: F

KnowledgePro 1.44 Knowledge Garden Inc.

A high-level language for building applications in DOS. It lets experts, authors and writers create tutorials and explain complex procedures or regulations using a unique combination of object-oriented programming, expert systems and hypertext techniques. Underlying this simple-to-use environment is a powerful symbolic language and an entirely new programming paradigm called the topic. Topics are "chunks of knowledge" containing rules, calculations, command hypertext or graphics. KnowledgePro can read external files, call external programs and access routines written in other languages.

List: \$495 Ours: \$449
FAXcetera #: 1474-0005 Return: F

Logic Gem 1.8 Sterling Castle

A decision table based logic processor and program code generator for programmers in C, BASIC, Pascal, FORTRAN, COBOL and dBASE. It eliminates coding errors and avoids hours of debugging time. It documents the logic assuring good communications between designer and coder plus reminds the programmer of the logic from one work session to the next.

List: \$149 Ours: \$134
FAXcetera #: 1635-0008 Return: O
90 day money back guarantee

FOREIGN LANGUAGE TRANSLATION

GTS-BASIC Globalink, Inc.

This is the best PC-based Foreign Language Translation. GTS-BASIC gives true translations on sentences or blocks of text with up to 90% accuracy! You can modify or add to the general dictionary of over 60,000 terms. The products handle idiomatic expressions and multiple translations of a word based on parts of speech. GTS-BASIC products available are: Spanish to/from English, French to/from English, German to/from English and Russian to/from English.

List: \$495 Ours: \$420
FAXcetera #: 3583-0001 Return: N



For the latest in software news
read Industry Currents
on pages 11 & 12.

Breaking The Foreign Language Barriers!

Globalink Translation Software...

incredibly accurate foreign language translations at record speeds.

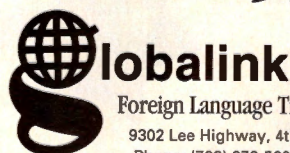
Works with word processors and desktop publishing systems!

Up to 100 times faster than human translators, with an accuracy rate often exceeding 90%, *Globalink Translation Software (GTS)* makes quick work of foreign language translations. Sentence by sentence — not word by word — in correct grammatical structure, *GTS* translates entire documents to and from English and Russian, German, French, Spanish. Producing clear, understandable text easily and automatically, right on your desktop PC. From only \$495, *GTS* is on the job in thousands of companies worldwide. So what's stopping you? Call Globalink now. And break through your own foreign language barriers in no time — without breaking your budget.



See your software dealer or call Globalink today!

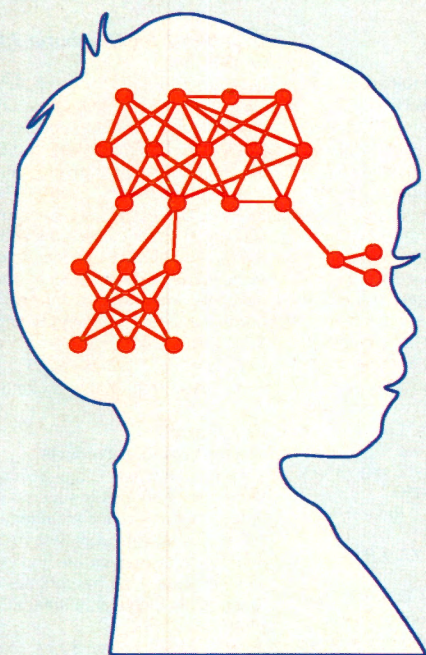
1-800-255-5660



Foreign Language Translation Software

9302 Lee Highway, 4th Floor, Fairfax, Va. 22031 U.S.A.
Phone: (703) 273-5600 • Fax: (703) 273-3866

GTS products run on IBM PCs and compatible computers, 12 MB hard disk, 640K RAM and DOS 3.1 or higher. Compatible with word processing programs via ASCII text files.
© 1992 Globalink, Inc. All rights reserved. Printed in the U.S.A.



“BrainMaker is the most fascinating computer software I've ever seen.”

**- John C. Dvorak
PC Magazine**

Why Program Your Computer When You Can Teach It to Learn?

Intelligent applications are the future of programming. BrainMaker makes it easy for you to create smart applications today.

BrainMaker models highly non-linear processes and learns from the past. BrainMaker builds your model automatically from examples you provide. BrainMaker reveals hidden patterns in any kind of data with no assumptions about form, no use of rules and no programming required.

BrainMaker can analyze any kind of real-world data - scientific, medical, engineering, financial and commercial. You can solve complex problems with hundreds of interrelated variables: real estate appraisals, budgets, process control, credit scoring, marketing demographics, sales forecasts and more.

BrainMaker runs on any PC-compatible or Macintosh. BrainMaker is a complete neural network development system which includes NetMaker data manager, tutorial and eight sample networks. BrainMaker imports Excel, Lotus, dBASE, ASCII & binary files; provides up to 512 neurons per layer, up to 6 hidden layers.

BrainMaker comes with 350-page User's Guide and bonus text *Introduction to Neural Networks and Expert Systems*. Specify PC or Macintosh version. Upgrades easily to BrainMaker Professional. BrainMaker is \$195.

BrainMaker Professional includes runtime license and source code sufficient to run trained neural network on any platform. Runs on any PC-compatible, supports very large networks (over 25,000 independent variables!), includes graphics support and Data Correlator to show correlations and optimum lag times. With optional accelerator board system, networks will run at up to 41.3 million connections per second on your PC, three times faster than a CRAY-1 supercomputer at 1/1000th the cost! BrainMaker Professional is \$795, optional accelerator board system is \$9,750.

To order BrainMaker: call Programmer's Paradise 800-445-7899. To order BrainMaker literature: call *FAXcetera* 908-389-8173 code 2163-0001. For BrainMaker Application Hotline: 800-284-8112. 30-day unconditional guarantee.

California Scientific Software

10024 Newtown Road • Nevada City, CA 95959 • 800-284-8112 • 916-478-9040

FORMS

E-Mail/C DOS 5-use/cc:Mail JetForm Corporation

Enables users to send and retrieve complex forms, designed with JetForm Design, and the data they contain throughout the enterprise. Include data entry fields, calculations based on the value of other fields, specific routing info, and security.

List: \$ 495 Ours: \$ 420
20-user version List: \$1495 Ours: \$1269
FAXcetera #: 0020-5201 Return: O
60 day money back guarantee.

Filler/C for DOS/Character JetForm Corporation

Enables users to fill forms created with design, gather data, and transmit it visually, on-screen data entry facility, full data validation, complete calculations, database query, read & write.

List: \$ 129 Ours: \$ 115
5-user version List: \$ 495 Ours: \$ 445
20-user version List: \$1495 Ours: \$1349
FAXcetera #: 0020-5202 Return: O
60 day money back guarantee.

Merge-DOS JetForm Corporation

Enables you to merge variable data from files created by any PC program with forms generated using Design. Since merge is invoked at DOS command line, its execution can be transparent to the end-user.

List: \$ 199 Ours: \$ 169
5-user version List: \$ 795 Ours: \$ 719
20-user version List: \$2395 Ours: \$2149
FAXcetera #: 0020-5203 Return: O
60 day money back guarantee.

Server for DOS LANS JetForm Corporation

Prints forms designed with JetForm Design in multi-user & network applications. Merge variable length data, any client LAN, including JetForm Filler can request forms and data merge services, one request can print multiple forms on multiple printers. 20-user included.

List: \$1195 Ours: \$1015
Unlimited Users List: \$2495 Ours: \$2225
FAXcetera #: 0020-5204 Return: O
60 day money back guarantee.



FORTRAN LANGUAGE

COMPILERS

Lahey F77L 5.0

Lahey Computer Systems

F77L is the only real mode compiler available that lets you take advantage of your 80386 PC by generating 32-bit instructions. Version 5.0 is a complete programming environment with an Editor, Profiler, Linker, Debugger and Make Utility. For porting mainframe code or development, F77L has many professional features: full ANSI77 compatibility, fast compilation, Microsoft and Borland C interfaces, excellent diagnostics, and popular mainframe features. New Fortran 90 features include: Allocatable arrays, CASE constructs, CYCLE and EXIT, Block Names, and many others.

List: \$595 Ours: \$535
FAXcetera #: 1476-0001 Return: F

Lahey Personal Fortran 77 3.0 Lahey Computer Systems

For programmers who want a powerful compiler but don't need to write programs larger than 64K. Includes full ANSI 77 Standard support, fast compilation to reduce development time, editor, Source On-Line Debugger (SOLD), Linker, Library Manager, helpful diagnostics and warning messages. It also includes math coprocessor support and emulation. The new 400-page manual highlights all FORTRAN 77 extensions. The Optional Toolkit includes productivity aids such as break handling, system subroutines, I/O, random number generator, and video graphics.

List: \$99 Ours: \$89
FAXcetera #: 1476-0002 Return: F

LPI-FORTRAN 3.4

Liant Software Corporation

A full implementation of the ANSI FORTRAN X3.9-1978 (FORTRAN-77), and is compliant with the X/Open, MIL-STD-1753, IBM System Application Architecture (SAA), and FIPS Pub 69-1 standards. A high-performance compiler that allows you to select various levels of optimization to further increase the execution speed of your program.

Supports cross-language calling, offers extended data types, including REAL*4, REAL*8, INTEGER*1, INTEGER*2, INTEGER*4, DOUBLE COMPLEX, DOUBLE PRECISION, COMPLEX*8, COMPLEX*16, LOGICAL*1, LOGICAL*2, and LOGICAL*4, and supports the following floating-point coprocessors: Weitek 1167, 3167, & 4167, plus Intel 80287 and 80387. Available on i386/i Sun Sparc, and 88000-based systems.

List: \$1295 Ours: \$1166
FAXcetera #: 1952-0004 Return: L

Microsoft FORTRAN Optimizing Compiler 5.0

Microsoft Corp

Create the fastest, most compact, and portable programs available from any FORTRAN development environment—whether on a personal computer, mini-computer, or mainframe. FORTRAN 5.0 includes new VAX extensions plus 100% IBM SAA compatibility. While a GSA-certified Full, ANSI '77 product, it also provides selected ANSI 8X FORTRAN extensions. Linking MS FORTRAN programs with routines written in other MS languages. MS's CodeView source-level debugger, the programmable MS Editor, & incremental linker provided with MS FORTRAN team up to provide a most productive & powerful development environment.

List: \$495 Ours: \$349
FAXcetera #: 1269-0003 Return: L

RM/FORTRAN

Liant Corp.

A full implementation of ANSI Standard FORTRAN X3.9-1978 (FORTRAN-77) with no errors. Contains key mainframe extensions from VAX, VS, FORTRAN-66 and supports arrays larger than 64KB. Powerful memory resource management allows multiple program units to share the same memory. Highly optimized code is generated for fast execution. Also includes a full-screen editor, an interactive symbolic debugger, a linker, library routines and utilities, a newly enhanced 8087/80287/80387 emulator to support IEEE floating point arithmetic, and RM/Forte—which integrates tools in a development environment to speed and simplify programming. RM/FORTRAN is available under MS-DOS and OS/2, and runs on the 80286 and 80386 processors.

List: \$595 Ours: \$499
FAXcetera #: 1952-0005 Return: L

WATCOM FORTRAN 77 9.0 WATCOM

A complete professional FORTRAN 77 development system for both DOS & OS/2. Based on the same technology as WATCOM C, F77 uses sophisticated register allocation and extensive code generator optimizations to produce fast, tight 16-bit 80x86 code. Offers protected-mode version of the compiler, full ANSI FORTRAN 77 language support plus extensions, SAA compatibility, GKS graphics library, full-screen source-level debugger, debugging of overlays, remote debugging capability, execution profiler and runtime compatibility with WATCOM C.

List: \$495 Ours: \$439
FAXcetera #: 1683-0004 Return: F

WATFOR-77 3.1 WATCOM

Streamlines FORTRAN 77 program development by completely integrating the compiler, editor, and debugger. Compile time is optimized by compiling the source code directly into memory, automatically linking and executing immediately. The interactive debugger provides a complete set of problem-solving aids to quickly pin-point problem areas. The integrated editor allows a program to be edited, compiled, and executed directly without leaving the WATFOR-77 environment. Supports full ANSI FORTRAN X2.9-1978 language as well as a significant number of enhancements. The IBM PC version also includes WATCOM GKS Graphics, a library of ANSI standard (level 0a) routines to create graphical images on a variety of output devices. Runs compatibly on IBM PC, IBM mainframes, and Digital VAXs.

List: \$375 Ours: \$338
FAXcetera #: 1683-0009 Return: F

GRAPHICS

GEOGRAF Professional 4.0 GEOCOMP Corporation

Allows mainframe graphing power to be added to PC programs. It provides simple CALCOMP compatible commands that help create report quality plots and graphs from inside PC programs. Supports 13 character fonts, 4 plot line types, an area fill routine, and rotate and re-scale commands. Device independence supports over 250 different output devices. Supports FORTRAN compilers.

List: \$325 Ours: \$293
FAXcetera #: 2219-0001 Return: F

GrafPRINT for Graphoria 2.0 AnSoft, Inc.

GrafPRINT for Graphoria supplements the Lahey Graphoria Graphics package by providing high resolution outputs on most Dot Matrix, LaserJet, InkJet, and PaintJet printer. Print utility allows for complete control of the printer. GrafPRINT now includes GrafFONTS, a library for generating graphics text on screen and printer. GrafFONTS includes 7 vector font sets with functions for scaling, spacing, italicizing, mirroring, orientation, justification, text color and bolding. NO ROYALTIES!

List: \$295 Ours: \$265
FAXcetera #: 3098-0002 Return: L

Graphoria

Lahey Computer Products

Graphoria, the new Lahey graphics library, is a compatible superset of the video graphics routine included with Lahey Fortran Language Systems. In addition to its own mouse and keyboard routines, Graphoria has routines that are functionally identical to the CalComp plotting routines.

(F77L or LP77) List: \$250 Ours: \$225
(F77L-EM/32) List: \$350 Ours: \$315
FAXcetera #: 1476-0005 Return: L

ADDITIONAL PRODUCTS

FOR STRUCT 2.0

Cobalt Blue

Transforms spaghetti FORTRAN into fully structured code. GOTO and IF-GOTOs are replaced with IF-THEN-ELSE, DO-WHILE and DO-ENDDOs. Original logic is retained, code is not duplicated and dead code can be removed. Structures to F-77, VAX F-77 or to VAX F-77 with FORTRAN-90 control statements. Now includes test coverage analysis, for finding hidden bugs.

List: \$825 Ours: \$743
FAXcetera #: 2114-0001 Return: O
Limited 15 day warranty. Do not break disk seal.

FORTLIB 6.0

Sutrasoft

FORTLIB comes with complete source code and has functions to handle keyboard, video, RS-232, disk drives, directories, files, system time and date, strings, memory allocation, data conversion, data sorting, system service, printer service character classification etc. Most of the functions are similar in function to the C language standard library. The code is compact and fast as almost all routines are written in assembly language.

List: \$250 Ours: \$225
FAXcetera #: 1720-0001 Return: L

PRO STRUCT 1.2 Cobalt Blue, Inc.

Utility to unscramble and restructure old FORTRAN to F-77 or VAX FORTRAN. Converts IF-GOTO and GOTO statements to IF-THEN-ELSE and DO-WHILE constructs, and DO..CONTINUE to DO..ENDDO Statements. Structures up to 500 lines per routine with no file size limit.

List: \$275 Ours: \$248
FAXcetera #: 2114-0003 Return: O
Limited 15 day warranty. Do not break disk seal.

◀ WE ACCEPT MAJOR CREDIT CARDS

GRAPHICS

Data Entry 1.6A Island Systems

A specialized library and CASE tool for creation of data entry menus. Features data validation and companion CASE tool for creation of form menus. Features data conversion, real-time data checks, dBASE like "picture strings", immutable characters, movement between fields, exit conditions from ANY field, context sensitive help, range checking, short cut keys, multiple title lines. Includes the Data Entry Designer that provides an on-screen WYSIWYG environment for creating form menus with automatic code generation. Source is available.

List: \$ 99 Ours: \$ 89
w/source List: \$224 Ours: \$199
FAXcetera #: 2088-0001 Return: L

Fastgraph 2.1

Ted Gruber Software

Fastgraph is a comprehensive, high-performance graphics library, well suited to writing games, educational software, scientific and business applications, and home entertainment products on DOS-based systems. It is fast, powerful, and easy to use. The library includes over 170 functions, ranging from simple pixel display to sophisticated animation tools. Fastgraph supports 22 video modes and works with most popular C/C++, BASIC, Pascal, and FORTRAN compilers. No royalties. Evaluation Kit available.

List: \$169 Ours: \$152
FAXcetera #: 2219-0002 Return: F

Figaro + 3.0

Liant Software Corporation

Figaro+ is an enhanced implementation of the ANSI/ISO programmer's hierarchical interactive graphics system (PHIGS). Standard for the C and FORTRAN programmer. It provides standard PHIGS functionality for those applications requiring dynamic and interactive modeling, viewing, modification, and rendering of 2D and 3D objects. Figaro_ is PHIGS+ and provides lighting and shading capabilities required for generating realistic models. Contains many extensions required for building high performance graphics applications. Models with 16 or 256 colors. Requires DOS 4.01 or higher, WATCOM C/386 8.5 or WATCOM FORTRAN/386 8.5 (should also work with C/386 9.0), Phar Lap/386 DOS-Extender 4.0.

List: \$995 Ours: \$749
FAXcetera #: 1952-0018 Return: F

Flash Graphics

FlashTek Inc

Flash Graphics, for Borland, Zortech, Microsoft, and other C/C++ compilers, supplies a debug library, which catches many errors immediately, and a standard library for maximum speed and minimum code. Multiple fonts, 8-bit virtual screens, and ability to put simultaneous graphics on multiple screens are provided. A special module (source code included) acts as an interface between applications written for BGI and Flash Graphics. No Royalties.

List: \$250 Ours: \$215
FAXcetera #: 1002-9201 Return: F

GRAF/DRIVE PLUS DTP Driver Disk 3.0

Fleming Software

Additional drivers for GRAF/DRIVE PLUS to support Desktop Publishing graphics files and color dot matrix printers. Creates graphic files in the following formats: PCX, TIFF (compressed & un-compressed), GEM IMG, Windows 3 BMP, CGM, AutoCad DXF, Word Perfect WPG, VideoShow (ANSI NAPLPS). Also includes drivers for Epson 9 and 24-pin color printers. Requires GRAF/DRIVE PLUS Developer's License.

List: \$149 Ours: \$134
FAXcetera #: 1720-0002 Return: L

GRAF/DRIVE PLUS Developer 3.0 Fleming Software

GRAF/DRIVE PLUS provides device-independent, BGI-compatible graphics drivers for: LaserJet, DeskJet, DeskJet 500-C; PaintJet, Epson/IBM 9-pin and 24-pin dot matrix printers; PostScript; and HPGL plotters. Screen graphics can often be "ported" to a printer by simply installing a printer driver. Output is at device resolution. Supports PostScript and LaserJet fonts. Color is supported for DeskJet 500C, PaintJet, PostScript, and plotters. You can print directly to a serial or parallel printer, or output to a file for later printing. Supports Turbo Pascal 5.0/5.5/6.0, Turbo C 2.0, Turbo C++, Borland C++ 2.0/3.0. No royalties.

List: \$299 Ours: \$269
FAXcetera #: 2872-0001 Return: F

GRAFLIB 5.0

Sutrasoft

GRAFLIB currently supports CGA, EGA, VGA, Hercules Graphics cards, EPSON, HP LaserJet, Postscript compatible printers. GRAFLIB contains routines to draw arcs, circles, ellipses, polygons, linear, log, polar, smith, bar and pie charts. Line types, fill colors, hatch styles, text orientation, direction, axes, tick marks, linear and logarithmic grid drawing. The library comes with full source code and a comprehensive manual. GRAFLIB is available for C, FORTRAN, BASIC and PASCAL.

List: \$250 Ours: \$225
FAXcetera #: 1720-0002 Return: L

graphics-MENU

Island Systems

The graphics-MENU GUI toolkit is a set of libraries (for C and Pascal), utilities and CASE tools that provides the developer of graphics applications with the tools to rapidly integrate a production quality interface into any application. Includes icons, windows, horizontal and pulldown menus, sub-menus nested to any level, scrollable checklist, buttons, Data Entry form menus, text editor window, pop-up messages, prompt boxes, and more. Features: EMS support, beveled or shadowed borders, full keyboard and mouse support. Comes with extensive Designer. CASE tools provide WYSIWYG design environments for creating horizontal, pulldown and form menus with automatic generation of complete, commented code in the target language. Includes extensive documentation and example programs to get you started quickly. Source is available.

List: \$249 Ours: \$224
FAXcetera #: 2088-0001 Return: F

Fastgraph™

...the programmer's graphics library

"Fastgraph is great...I recommend it to people all the time. Two of my development teams are writing Apogee games with Fastgraph right now."

Scott Miller
Apogee Software

A full-featured graphics library

Fastgraph is an ideal development tool for educational and entertainment software, scientific and engineering applications, presentation graphics, CAD, or any application that demands robust graphics. It offers functions from simple pixel display to sophisticated animation tools, each written in hand-optimized assembly language for maximum performance and minimum code size.

Extensive video and compiler support

Fastgraph supports 22 video modes: standard VGA, extended VGA (including "mode X"), EGA, MCGA, CGA, Hercules, Tandy, and color and monochrome text. With Fastgraph, it's easy to write programs that run in several video modes by changing just a few lines of code. You can use Fastgraph with most popular C, C++, Pascal, BASIC, and FORTRAN compilers, or any MASM/TASM compatible assembler.

Order Fastgraph for \$169 and advance into the world of high-performance graphics programming. Available through the Programmer's Paradise or directly from:

Ted Gruber Software

PO Box 13408 Las Vegas, NV 89112

Voice (702) 735-1980 • FAX (702) 735-4603 • BBS (702) 796-7134

Call for a free demo disk or download an evaluation kit from our BBS today. No run-time royalties. Visa, M/C, COD, and purchase orders accepted.

GRAF/DRIVE PLUS 3.0

Turbo Graphics for Printers, Plotters—and now DTP Files

Publication-quality hard copy graphics for Turbo C & Pascal! Install our BGI printer drivers and your screen graphics program prints graphs too. Add our new DTP file formats and import the graphs to your desktop publisher or word processor. Great for user manuals!

- LaserJet, Epson, DeskJet, DeskJet 500C, PostScript, ProPrinterX24, PaintJet, HPGL plotters, and more.
- PCX, TIFF, CGM, WPG, DXF, VideoShow, color dot matrix printers, and more (DTP Driver Disk).
- Arc, bar, bar3d, circle, fillpoly, line, ellipse, pieslice, line/fill patterns, etc—all 100% interchangeable with Turbo's screen graphics. Plot to LPT, COM, or disk.
- Use PostScript fonts and LJ soft fonts (including LJIII scalable fonts), plus Borland stroke fonts.
- Not a screen dump. You get the full printer resolution.
- Not TSR. Loads on the heap at runtime. EMS optional.
- Portrait and landscape. Control image size/location.
- Compatible with Graphics Menu, Zinc, Turbo Vision.
- "Highly recommended." - Jeff Dunteman, Dr. Dobbs, 11/90. Our customers include Harvard, UCLA, HP, TRW, and Los Alamos Labs.

For Turbo C 2.0, C++, Pascal 5-6. Personal License \$149, Developers with royalty-free distribution \$299. Supplemental DTP Drivers \$99. 30-day m/b guarantee.

FLEMING SOFTWARE BOX 569 OAKTON, VA 22124
(703) 591-6451

For return policy details,
turn to page 75.

GX EFFECTS 2.0

Genus Microprogramming

Use special effects without being restricted by an editor or slideshow program. Professional graphic effects are available from almost any graphics mode of the Hercules, CGA, EGA, VGA and most extended VGA adaptors. A full range of fades, wipes, splits, and smooth scrolling routines are included along with a complete music definition language with 40+ song examples. A Sound Blaster voice file interface is also included. Supports the same languages and compilers that the PCX Programmer's Toolkit supports. The PCX Toolkit, GX Graphics, or GX Text recommended, but not required.

List: \$199 Ours: \$179
w/source List: \$399 Ours: \$359
FAXcetera #: 1991-0003 Return: F
(Binary Version) L (Source)

GX Games

Genus Microprogramming

A collection of five full-featured games written using one or more of the toolkits in the GX Development series. Normally, a game package includes only the executable program. The executable games are provided, along with actual source code for each game in C, Pascal, and Basic. Not only are the games fun to play, they are an excellent learning tool for the GX Development Series. The games make the learning interesting and they cover most of the major concepts when writing any kind of graphics oriented program.

List: \$59 Ours: \$53
FAXcetera #: 1991-0008 Return: L

GX Graphics 2.0

Genus Microprogramming

A comprehensive graphics library written entirely in Assembly language for fast, tight code. GX Graphics replaces and

extends the capabilities of compiler libraries like Microsoft Graphics or the Borland BGI. All graphics primitives are supported, including: dots; lines; squares; rectangles; circles; ellipses; arcs; and filled primitives. Over 30 graphics modes are supported from Hercules through Super VGA.

List: \$249 Ours: \$224
w/source List: \$699 Ours: \$559
FAXcetera #: 1991-0006 Return: F
(Binary Version) L (Source)

GX Text 2.0

Genus Microprogramming

Relieves the programmer from having to write routines for user input, data entry and string display while in graphics mode. This product was designed for high speed text. Written in assembly language for the tightest, fastest code possible. You can load several different text styles and create or edit our own with the graphical font editor provided. Write text directly to

virtual buffers. Store and load fonts from libraries or the programs EXE. Supports the same languages and compilers that the PCX Programmer's Toolkit supports.

List: \$149 Ours: \$134
w/source List: \$349 Ours: \$279
FAXcetera #: 1991-0004 Return: F
(Binary Version) L (Source)

HALO Image File Format Library for DOS 1.0

Media Cybernetics

A collection of routines that add image file reading and writing to your applications. Makes your application instantly compatible with hundreds of graphics and imaging products. The HALO Image File Format Library works with any graphics library or can be used alone. Supports TIFF (Tagged Image File Format), PCX (PC PaintBrush), BMP (Windows Bitmap), and CUT (Dr. HALO). List: \$349 Ours: \$279
FAXcetera #: 1045-0010 Return: N

HALO Professional Media Cybernetics

HALO Professional is an all new implementation of the world's most popular graphics library for professional developers—HALO. Compared to previous versions, new HALO Professional is up to ten times faster. HALO Professional supports every significant graphics device produced today. Display adapters include most Super VGA, 8514/A, TIGA, TARGA, XGA and many others. HALO Professional supports more printers, plotters and scanners than any other graphics library. HALO Professional gives you more control over hard copy. Only HALO Professional offers you: image scaling to any size, complete control over color mapping, portrait or landscape orientation, print to file, and much more.

List: \$395 Ours: \$315
FAXcetera #: 1045-0001 Return: N

LEADTOOLS 32 Lead Technologies

A 32-bit run-time library for compressing, decompressing, converting, resizing, rotation, flipping, and viewing of images. LEADTOOLS 32 delivers speeds previously achieved only with hardware but in a software library. Compress color and greyscale images to over 200:1 ratio. Supports SPEG, LEAD CMP, TGA, TIFF, BMP, PCX, GIF, WMF, and EPS. Video supports VGA, SVGA, Hi-color, True color, TARGA/+ and VISTA boards. Specify compilers.

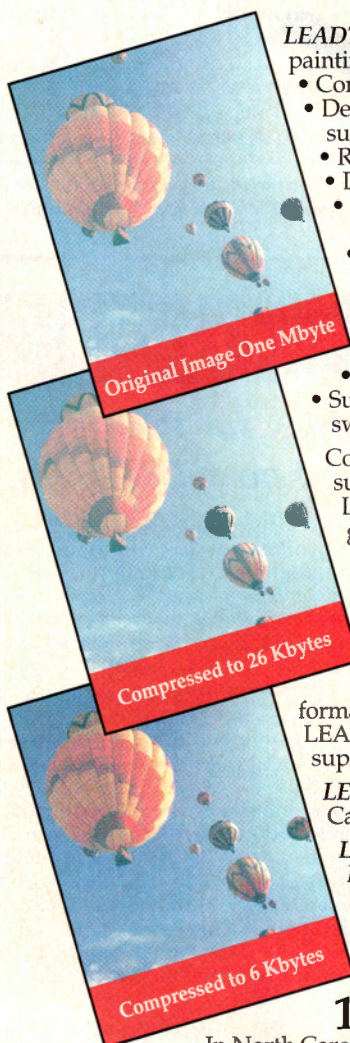
List: \$995 Ours: \$899
FAXcetera #: 1005-0101 Return: F

LEADTOOLS Lead Technologies

A C run-time library for the DOS (LIB) developer, which allows the incorporation of image compression, viewing, form, at conversion, and other image processing into specific applications. Image can be flipped, rotated, reversed, resized and displayed any place on the screen. Compress color and grey scale images to over 200:1 ratio. Supports SPEG, LEAD, CMP, TGA, TIFF, BMP, PCX, GIF, and more. Video supports VGA, SVGA, Hi-color, and True color boards. Royalty Free! Specify DOS or DLL.

List: \$995 Ours: \$899
LEADTOOLS—No Compression Version
List: \$249 Ours: \$228
FAXcetera #: 1005-0102 Return: F

Don't Deflate Your Image.



LEADTOOLS — Tools to enhance image databases, painting, drawing and video production applications.

- Compress images up to 255 to 1
- Decompress images to video memory or supported file formats
- Resize an image "on the fly" for optimal display
- Display an image at specified locations on screen
- Accelerate electronic transmission of high quality images
- View supported image files on VGA, Super VGA and TARGA
- Convert between most popular image formats
- Find optimal 256-color palettes for 16-, 24- and 32-bit images
- Flip, rotate, reverse and resize images
- Support extended and expanded memory and swapping to disk

Compression and decompression functions support JPEG, JTIF, JFIF and JPG formats and LEAD's CMP format. LEAD's CMP format offers greater compression ratios and superior image quality. The compressed file can be decompressed to 8-, 16-, 24-, and 32-bit mediums.

All functions support TGA (8-, 16-, 24- & 32-bit), TIFF (8- & 24-bit), BMP (4-, 8-, & 24-bit), PCX, GIF, JTIF, JFIF, and CMP file

formats. A well-defined handle provides access to LEAD's functions for image file formats not currently supported.

LEADTOOLS & LEADTOOLS - no compression
Call for a current list of supported compilers.

LEADTOOLS Windows DLL & LEADTOOLS Windows DLL - no compression
Includes all LEADTOOLS features and a 256-color palette editor.

All products include complete source code examples and do not require royalties.

1-800-637-4699

In North Carolina call 704-549-5532

LEADTOOLS

LEAD Technologies, Inc. • 8701 Mallard Creek Road • Charlotte, NC 28262

All product names are trademarks of their respective companies.



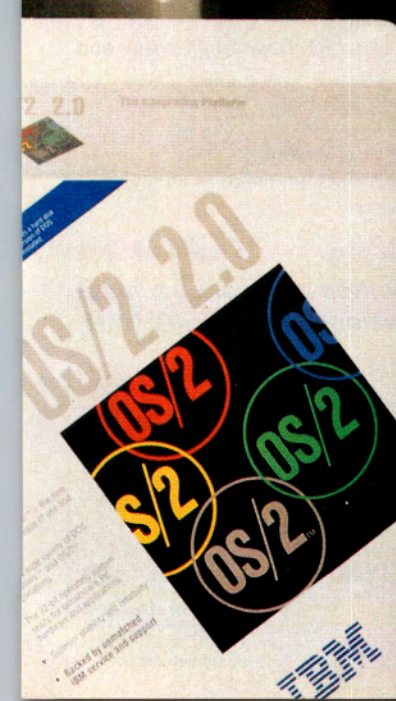
IBM's Software Developer Support Group wants to help your OS/2 2.0 products succeed. We'll provide technical and marketing assistance to help you optimize your products and market them successfully while you develop software that exploits the power and sophistication of OS/2 2.0.

Bring your dreams to reality. Call (407) 982-6408 for information.

**You and IBM —
Partners in Development!**

IBM
®

More
The world is
and
discovering the
More
power of OS/2.



PCX Toolkit 5.0

Genus Microprogramming

Lets developers create applications that can display, save, print, scroll, size & scale, capture and manipulate PCX format images. Over 90 routines are included. Access over 30 graphics modes and adapters, including the high resolution modes of the EGA, VGA and Super VGA. Supports Borland Turbo Assembler, Borland Turbo C and C++, Borland Turbo Pascal, Lattice C, MS BASIC, MS C/QuickC, MS FORTRAN, MS Macro Assembler, MS Pascal, MS QuickBASIC and Nantucket Clipper. Requires MASM to reassemble the source code and 256K memory. Supports Hercules, CGA, EGA, VGA and extended VGA graphics adapters.

List: \$249 Ours: \$224
w/source List: \$599 Ours: \$539
FAXcetera #: 1991-0002 Return: F
(Binary Version) L (Source)

PGL Toolkit 2.0

AnSoft, Inc.

PGL is a set of easy to use libraries allowing high resolution printing of bitmap images or vector drawings on most DOT Matrix, LaserJet, DeskJet, PaintJet, or PostScript printers as well as PCX format. Features include: C, BASIC, FORTRAN, PASCAL, Clipper, and Assembly language support; compatible with most DOS Extenders; device independent programming environment; full printer control (margin, layout, resolution, etc.); source code and UNIX versions available. NO ROYALTIES!

List: \$195 Ours: \$179
w/source code: List: \$595 Ours: \$536
UNIX w/source: List: \$995 Ours: CALL
FAXcetera #: 3098-0003 Return: L

LINKERS/LIBRARIANS

286 Overlay Series 3.12

AtLast! Software

Creates overlay structures for PLINK86+, .RTLlink, and .RTLlink Plus. Architect scans object and library modules and builds a link response file to provide a very compact, reliable overlay structure. Handles up to 16,000 modules, overlays data, and handles indirect calls automatically. Optimizer re-engineers overlay structure for maximum performance. Specify PLINK or .RTLlink version.

List: \$289 Ours: \$259
FAXcetera #: 1002-3101 Return: F

386 Overlay Series 3.12

AtLast! Software

Creates overlay structures for PLINK86+, .RTLlink, and .RTLlink Plus. Architect scans object and library modules and builds a link response file to provide a very compact, reliable overlay structure. Handles up to 64,000 modules, overlays data, and handles indirect calls automatically. Optimizer re-engineers overlay structure for maximum performance. Requires 386 or 486. Specify PLINK or .RTLlink version.

List: \$339 Ours: \$305
FAXcetera #: 1002-3102 Return: F

Keep our number at
your
fingertips!



Blinker 2.0

Blisk, Inc.

Fast dynamic overlay linker for C, C++, ASM, Basic, QuickBASIC, Fortran, Pascal, Clipper, etc. with new integrated memory swap function designed to save time and memory. Automatically creates fast, stable overlaid .EXEs to reduce memory requirements. Uses EMS/XMS memory to save the currently executing program and run a second within the first. Features CodeView and limited Turbo debugger support.

List: \$299 Ours: \$269
FAXcetera #: 2534-0001 Return: F

OPTLINK/Compress 3.0

SLR Systems

OPTLINK/Compress 3.0 is the "World's only Compressing Overlay Linker." This linker, as a drop-in replacement for LINK, permits storage of large programs on one floppy disk. Other beneficial features include calling as many as 8,192 overlays, support of function pointers, EMS/XMS caching, compression of the root and the overlays, both small and large model overlays and auto-allocate libraries. OPTLINK/Compress needs only 1K extra memory for its decompression routine and is Code View-compatible. It also sets no limitation on the number of publics, modules, libraries or segments being linked.

List: \$350 Ours: \$315
FAXcetera #: 1769-0001 Return: L

Overlay Toolkit 1.22

Lloyd Bush, Inc.

The Overlay Toolkit consists of Overlay Master and Overlay Probe. Overlay Master is a tool for programmers who use the overlay feature of PLINK86+ or a compatible linker in their application programs. It analyzes the object modules to automatically design an effective overlay structure. Overlay Probe is a companion tool which allows you to easily make adjustments to the overlay design.

Small model List: \$395 Ours: \$349
Large model List: \$995 Ours: \$899
FAXcetera #: 2850-0001 Return: N

PLINK86+ 2.3

Lifeboat Software

PLINK86+ is a linker that provides advanced overlay capabilities. It handles any compiler or assembler producing standard Intel or Microsoft OBJ files. Virtual memory management ensures ample capacity for symbol and common block names (nearly 33,000). PLINK86+ supports an unlimited number of modules and up to 4,095 overlays nested up to 32 deep. It merges object modules, caches, overlays in extended memory and automatically reloads overlays upon function return. PLINK86+ can also link DOS files under OS/2.

List: \$395 Ours: \$335
FAXcetera #: 0233-0004 Return: F

PolyLibrarian 2.3

Lifeboat Software

PolyLibrarian is a utility for creating and managing object module libraries, including OS/2 and Windows IMPORT libraries. It works with compilers and assemblers that produce object modules compatible with Microsoft linker, PLINK86+ or other compatible linkers. It lets you add, delete, replace and extract object modules to and from library files. PolyLibrarian time-stamps each module in a library. Any identifier can be changed to

prevent name conflicts and the user can substitute modified versions of library routines. PolyLibrarian can delete debug records without recompiling source code.
List: \$249 Ours: \$225
FAXcetera #: 0233-0005 Return: F

.RTLlink

Pocket Soft, Inc.

Memory Image reduction (typically) 33-67% through multiple and nested overlays. No source changes. Smart overlay caching from conventional, extended, or expanded memory (and disk). Dynamic Data overlays allow storage of changing variables in overlays. Other features assist overlaying static data. Utilities to help define and refine your overlay structure. Major disk savings by storing common code once on disk. Works with almost all MS-DOS programming languages.

List: \$295 Ours: \$265
FAXcetera #: 1987-0002 Return: L

.RTLlink/Plus with VML

Pocket Soft, Inc.

Executes several megabyte programs. Minimum 100K conventional memory required. No source code changes. Automatic or fine tune. Executes in expanded (if present), intelligent, automatic caching of 'pages' from conventional, disk, expanded (if present), extended (if present). Software solutions for XT, AT, 386 and above. Outstanding runtime performance. Supports most MS languages, CodeView. Supports all features of .RTLlink plus profiler.

List: \$495 Ours: \$445
FAXcetera #: 1987-0003 Return: L

PASCAL LANGUAGE

COMPILERS

LPI-PASCAL

Liant Software Corp.

Liant's Pascal is an implementation of the ANSI/IEEE Pascal 770X3.97-1983 standard, and conforms to the ISO/7185 Level O standard. Liant's Pascal is a quality Pascal compiler, specifically designed to meet the needs of computer manufacturers, large software development firms, and the federal government. Extensions allow compatibility with most Pascal dialects. Liant's Pascal supports external subprograms, separate compilation of Pascal units, and several other constructs and features that exceed the standard. Liant's Pascal is offered under the UNIX operating system, and runs on popular hardware configurations. These include Motorola's 680X0 technology, the RISC-based 88000, AT&T's WE32XXX, and Intel's 80386.
List: \$695 Ours: \$629
FAXcetera #: 1952-0001 Return: L



PRINTER GRAPHICS LIBRARIES

Support For DOS, 32-Bit & UNIX!

Would high resolution B&W and color printer support enhance your graphics application? Do you need portability between DOS, 32-bit, and UNIX environments? Then compare **PGL Toolkit** with the competition.

- ☛ Includes complete support for **C/C++, FORTRAN, PASCAL, BASIC, CLIPPER, and ASSEMBLY.**
- ☛ 80+ function linkable graphics libraries.
- ☛ Fast printing on most Dot Matrix, LaserJet, DeskJet, PaintJet, and PostScript printers.
- ☛ Supports virtual bitmap printing with dithering.
- ☛ Print and/or generate PCX files.
- ☛ Device independent programming environment.
- ☛ Can be used in conjunction with **ANY** screen graphics library.
- ☛ Compatible with most DOS extenders.
- ☛ **NO ROYALTIES!**

"easy to integrate ... well written manual ... a must have for every graphics developer." - Steve Boymel, Pres. - Future Graph, Inc.

PGL Toolkit v2.0 \$245
PGL Toolkit w/source \$595
PGL Toolkit for UNIX w/source \$995
PGL Toolkit-OS/2 Comming \$CALL

AnSoft, Inc. ■ 8254 Stone Trail Ct. ■ Laurel, MD
Voice/FAX (301)470-2335



How much longer can you afford to wait?

Create Overlaid Programs-Fast.

BLINKER™, the world's first and fastest dynamic overlay linker, reduces your link time to seconds and reduces program memory requirements. Now you can use one linker for all your software projects.

One Linker, Many Languages.

BLINKER 2.0 links and automatically overlays DOS programs written in Microsoft® C, BASIC, Assembler, QuickBASIC™, Fortran, Pascal, Watcom™ C, Zortech® C++, Clipper®, FORCE® and in Borland® C, C++, Assembler, and more.

Save Time and Memory.

BLINKER removes the need for overlay structures, simplifies program design and reduces memory requirements to save you time, effort and memory.

Memory Swap Function.

BLINKER is the ONLY linker to offer an integrated memory swap function, so you can run other large programs from within your program, with negligible memory overhead.



BLINKER™
High Performance Dynamic Overlay Linker

Don't Settle for Less.

Other major features include full CodeView® support, use of EMS/XMS at program run time, and enhanced execution speed of overlaid code.

Time is Money.

BLINKER offers all this in a fraction of the time it takes to link with your current overlay linker. You know time is money, and link time is no exception.

Free Demo

To try our free demo on your own code

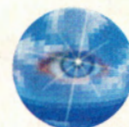


Call: 804-355-4444 or
FAX: 804-355-1676

Order now!

If you can't wait any longer, we offer a risk free 30 day money back guarantee. Available in 5.25" or 3.5" diskette format.

Price \$299
plus shipping & handling



Blinkinc
P.O. Box 7154
Richmond VA
23221

Microsoft Pascal 4.0

Microsoft Corp

Microsoft Pascal is powerful enough to push the limits of your personal computer. With large symbol table support and OS/2 support, you can write larger programs such as symbol-heavy Window applications with ease in both OS/2 and MS-DOS. Also, for the first time, the revolutionary Microsoft CodeView Debugger and the Microsoft Editor have been included for fast, efficient program development. You can use data up to the limit of available memory. Then link in separate modules and use overlays. Microsoft Pascal also comes with the BCD and floating point math libraries, including IEEE floating point emulation and math coprocessor support. And it supports direct inter-language calling to modules written in Microsoft C, FORTRAN or Macro Assembler.

List: \$300 Ours: \$212
FAXcetera #: 1269-0026 Return: L

Turbo Pascal 6.0

Borland International

Makes object-oriented programming easy. Version 6.0 takes you from structured programming to object-oriented programming step-by-step. You can now learn object-oriented programming in the comfort of the familiar Turbo environment. All the object-oriented terminology and concepts you learn can be applied to C++. Object-oriented extensions feature dynamic and static objects, virtual and static methods, constructors, destructors, and object constants.

List: \$150 Ours: \$113
FAXcetera #: 1861-0009 Return: L

Turbo Pascal Professional 6.0

Borland

Value-bundled combination of Turbo Pascal 6.0/Turbo Debugger & Tools 2.0. List: \$300 Ours: \$225
FAXcetera #: 1861-0010 Return: L

FILE MANAGEMENT

B-Tree Filer 5.2 (single user)

TurboPower Software

Makes writing network compatible database applications easy and reliable. Applications can run in single user mode, or on Novell, MS-NET, 3Com, and other networks. Features include fixed and variable length records, two billion records per database, utility units for browsing databases, rebuilding corrupted indexes, sorting, and more. Network version available. Full source code included. No royalties. Requires Turbo Pascal 5.0, 5.5, or 6.0, or Turbo Pascal for Windows.

List: \$139 Ours: \$109
Network: List: \$189 Ours: \$149
FAXcetera #: 1565-0002 Return: F

TOPAZ and TOPAZ LAN 3.0

Software Science, Inc.

Single- and Multi-user Relational Database Management System to write complete applications with "dBASE-like" syntax in Turbo Pascal or QuickPascal. Read from, write to, and create dBASE data and memo files. SELECT up to 25 data areas with up to 16 indexes. Database positioning via GoTop, GoBottom, GO, SKIP, and so on. Five powerful ways to locate and access data: Indexed FIND, "Soft" Find, Soundex, SEARCH and PEEK. SAY prompts, GET variables at any screen coordinate, SET COLOR TO, PICTURE and RANGE clauses, custom VALIDATION procedures. Complete full-featured, program-

mable Wordstar-like editor for both memo and text files. Utilities to create and browse dBASE files, a dBASE-like report and code generator, and a full-featured Phone Book application with commented source code. 600 page manual.

Single User List: \$99 Ours: \$89
Multi User List: \$149 Ours: \$134
FAXcetera #: 1804-0001 Return: F

Topaz Multi-user 3.0

Software Science, Inc.

Write multi-user applications with "dBASE-like" syntax in Pascal. Supports file and record locking of 25 concurrent databases each with up to 16 indexes. TOPAZ reads/writes/creates DATAFILES and supports dBASE memo fields. Comes with a windowed browser, free utilities, a full-featured text editor, dBASE-like report and code generator.

List: \$149 Ours: \$134
FAXcetera #: 1804-0001 Return: F

LIBRARIES

ASYNCH PLUS 5.0

Blaise Computing, Inc.

Asynch Plus is a comprehensive set of routines that allow you to build asynchronous communications into Pascal programs and solve the problems of serial communications. You can set port options, capture data reliably, command modems, transfer files using X and YMODEM file transfer protocols, and control up to four ports simultaneously. Supports Turbo Pascal 4.0 or later.

List: \$219 Ours: \$175
FAXcetera #: 1652-0004 Return: F

Async Professional 1.0

TurboPower Software

Async Professional is a powerful, up-to-date library of asynchronous communications functions for Turbo Pascal programmers working in the DOS environment. Features include object-oriented and procedural programming interfaces, buffered I/O up to 115K baud, buffered UART support, file transfer protocols including ZMODEM and Kermit, built-in tracing and debugging, terminal emulation, and modem control. Full source code included. No royalties. Requires Turbo Pascal 5.5 or 6.0.

List: \$139 Ours: \$109
FAXcetera #: 1565-0004 Return: F

Object Professional 1.1

TurboPower Software

An object-oriented library for Turbo Pascal. It provides over 100 high-level object types with over 2000 methods for user-interface design, data manipulation, and low level system access. System-oriented routines allow swappable TSRs in 6K of RAM and more. Includes complete source code, full documentation, and pop-up help. No royalties. Requires Turbo Pascal 5.5/6.0.

List: \$189 Ours: \$149
FAXcetera #: 1563-0003 Return: F

Power Tools Plus 5.1

Blaise Computing, Inc.

Power Tools Plus is a general purpose library of functions and procedures that allows you to create a sophisticated virtual windowing system with borders and drop shadows supporting all styles of menus with integrated mouse support. Routines for building ISRs and TSRs are provided. Supports Turbo Pascal 4.0 or later.

List: \$169 Ours: \$135
FAXcetera #: 1652-0003 Return: F

Turbo Professional 5.1

TurboPower Software

A library of over 600 procedures and functions specifically for Turbo Pascal. The routines include TSR management, data entry screens, pop-up help routines, DOS functions, EMS and extended memory access, and much more. Full documentation and source code is included. No royalties. Requires Turbo Pascal 4.0, 5.0, 5.5 or 6.0, or Quick Pascal.

List: \$125 Ours: \$99
FAXcetera #: 1565-0004 Return: F

Turbo Vision Development

Toolkit 1.0

(Version 2.0 w/C++ support available June 1st)

Blaise Computing, Inc.

A set of utilities and object libraries designed especially for use with Turbo Pascal 6.0's object-oriented, event-driven framework, Turbo Vision. Includes a Resource Editor for interactively creating or changing dialog boxes and other resources, a utility to convert Turbo Vision resources into Windows resource script files and an object library that extends Turbo Vision's capabilities. Supports Turbo Pascal 6.0. (C++ support available June 1st).

List: \$169 Ours: \$135
FAXcetera #: 1652-0013 Return: F

PROTOTYPING

Dan Bricklin's Demo II 3.0

Lifeboat Software

Demo II is a tool for producing application prototypes, demonstrations, and tutorials (CBT). Can be used quickly and simply by drawing or capturing screens and displaying them like slides. Advanced features can be used to construct prototypes that interact with users and respond just like live programs. Built-in text screen design tools. Text and graphics screen capture program included. Mouse support. Unlimited runtime distribution, subject to license agreement.

List: \$249 Ours: \$229
FAXcetera #: 1418-0001 Return: F

Dan Bricklin's Demo II

Professional 3.0

Lifeboat Software

Upgraded version for Demo II for the professional user. The professional version includes the ability to encrypt files so they cannot be modified by unauthorized users and removes the copyright notice from the beginning of the demo. Upgrade pricing available for standard Demo II users.

List: \$995 Ours: \$799
FAXcetera #: 1418-0001 Return: F

Instant Prototyper (for MS-DOS) 3.0

WinSoft

Designs fancy data oriented applications. Demo to users on DOS text or MS-Windows without programming. Make changes based on their feedback. Supports data entry and validations including mandatory, protected, picture, range checks and lists. CUA compatible objects include main windows, dialogs, mouse, menus, buttons, hypertext, scroll bars, list boxes, direct-ories, text editor and spreadsheet-like scrollable tables.

List: \$99 Ours: \$89
FAXcetera #: 2867-0001 Return: F

INSTANT REPLAY PROFESSIONAL (IRPRO) 2.5

Instant Replay Corporation

IRPRO is an authoring/development software system for the creation of: 1) Demo disks and software ads, 2) tutorials, training materials, CBT, 3) professional presentations: a) Laserdisk based, and b) computer managed slideshows. IRPRO manages the capture of audio, video, graphics, animations and compressed video for incorporation into your presentation. Royalty free distribution. DOS based for compatibility with over 80% of the PC installed base.

List: \$795 Ours: \$619
FAXcetera #: 1760-0001 Return: F

John Bickart's Clip Art

for Demo II

Lifeboat Software

Add sights, sounds, and color to your Demo II presentation with John Bickart's Clip Art for Demo II. Cut and past directly from the Clip Art Libraries directly into your demonstration or prototype. Graphics Library - over 300 .PCX images ready to use with Demo II, mixed VGA, EGA, CGA and Mono. Sound Library - Melodies, Sound Effects, electronic piano player, and note range. Color Library - colors, menus, and text windows.

List: \$79 Ours: \$72
FAXcetera #: 0233-0012 Return: F

John Bickart's CBT Tool Kit

for Demo II

Lifeboat Software

Build effective tutorials rapidly with John Bickart's CBT Tool Kit makes it better by adding pre-built templates and examples that you can cut and paste directly into your own lessons. Contents include: working CBT models, student responses to a question, feedback on student progress, gaming as an instructional tool, expert reviews for wrong answers and much more! Includes John Bickart's Clip Art for Demo II.

List: \$169 Ours: \$152
FAXcetera #: 0233-0013 Return: F

John Bickart's Starter Kit

for Demo II

Lifeboat Software

Tap into the real POWER of Demo II! Templates, examples, and tutorials covering all aspects of Demo II - modifiable to fit your needs. Includes advanced templates for common situations (Sales Demo, Mainframe Simulation, CBT Tutorial, and more). Self-Guided tour shows you how Demo II really works. "My First Project" Guide gives detailed instruction on prototype and demo development. Eight tutorials cover every major Demo II feature in detail.

List: \$149 Ours: \$134
FAXcetera #: 0233-0007 Return: F

Personal Rexx 3.0

Quercus Systems

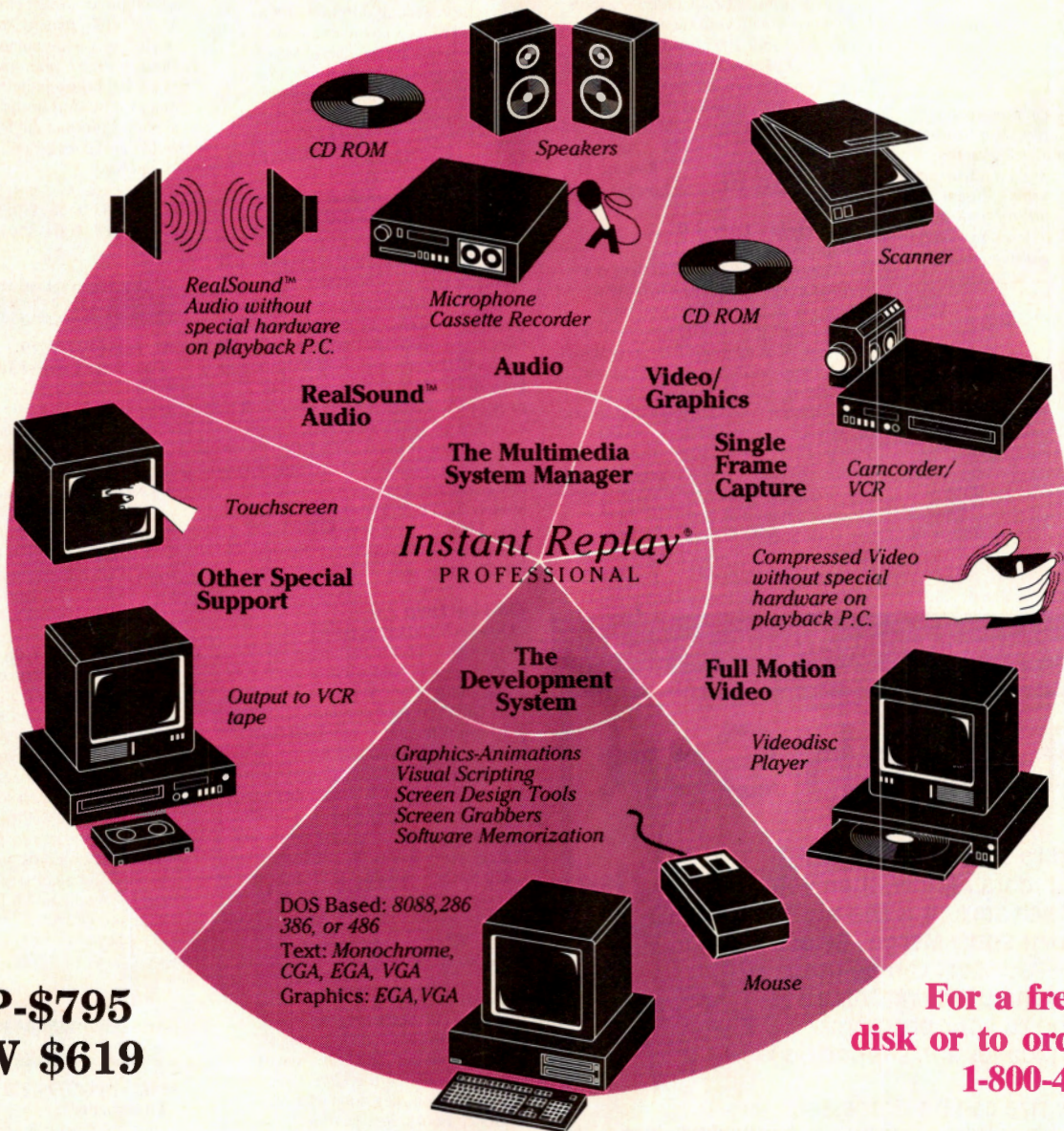
Personal Rexx is a complete implementation of the SAA Rexx Procedure Language for OS/2, DOS, and Windows. It supports batch files, prototyping, application script writing, and general personal programming. Numerous functions for file system access, operating system control, and screen management are included. A new swapping capability minimizes storage used in DOS.

DOS List: \$150 Ours: \$135
OS/2 List: \$175 Ours: \$158
FAXcetera #: 2391-0001 Return: F

For return policy details, turn to page 75.

Instant Replay Professional®

Develop multimedia & run it, with one program.



SRP-\$795
NOW \$619

**For a free demo
disk or to order call:
1-800-445-7899**

Multimedia Presentations
Diskette Based Advertising
Computer-based Training
Demo/Tutorial Generation
Courseware Authoring
Interactive Video
Kiosk Applications

Instant Replay Professional is a "Multimedia Systems Manager" designed for authoring tutorials, CBT courseware, diskette based software ads, and computer based professional presentations. Instant Replay Professional serves as the systems manager for incorporating DOS based software, audio, video, graphics, animations, and special effects into your presentation. Royalty free

distribution compiler included. No acknowledgement required to Instant Replay Corporation.

Contact your software dealer or call toll free 1-800-388-8086.

Instant Replay®
CORPORATION

4525 S. Wasatch Blvd., Suite 335
Salt Lake City, Utah 84124
Phone: (801) 272-0671
Fax: (801) 272-0675
Order Hotline: 1-800-445-7899

Proteus 6.0

Genus Microprogramming
Create self-running or interactive software demos, tutorials, and prototypes that respond to keystrokes, mouse events, and more! Includes 30+ video effects, clear pull-down menus, slide advance control, full mouse support, screen grabber support, a built in help system, and the ability to group demo files into a single .EXE file. Comes bundled with PC Paintbrush IV. No sign-on screen.
List: \$349 Ours: \$314
FAXcetera #: 1991-0001 Return: F

Show Partner F/X 3.6

Brightbill-Roberts
Create and show dynamic presentations using color, graphics, animation, special effects and sound. Features interactive capabilities, branching and an advanced memory management system. Create computer generated board-room or sales presentations, interactive training materials or distribute a demo disk featuring your company product or message.
List: \$350 Ours: \$315
FAXcetera #: 1001-6002 Return: L

Tour de IRPRO 1.0

Instant Replay Corporation
Contains two sections. 1) Tour de IRPRO is an overview of the features of Instant Replay Professional (IRPRO), and 2) the IRPRO Hands-on Tutorial provides step by step instructions on how to use IRPRO features to develop a Demo disk, Software Ad, Tutorial, and or Training Materials-PC hard drive or diskette based.
List: \$150 Ours: \$119
FAXcetera #: 1760-0002 Return: N

REFERENCE GUIDES

Expert Help - Personal Use 3.0

SofSolutions
The Expert Help Hypertext System is a Norton Guides compatible hypertext system. With Expert Help, you have instant access to hundreds of topics while using just 1K of memory. Features include: Auto-lookup, VGA and Mouse Support, Text Pasting, Global Searching and much more. Also included are tools that let you create your own Help files or modify ones that you already have. MS-DOS, PC-DOS. Requires a hard disk and 1k of main memory w/64k EMS. Specify 5.25 or 3.5 inch diskettes.
List: \$129 Ours: \$116
Comp. Upgrade List: \$179 Ours: CALL
FAXcetera #: 1893-0007 Return: O
60 Day guarantee. Free technical support.

Expert Help - LAN 3.0

SofSolutions
The Expert Help Hypertext System is a Norton Guides compatible hypertext system. With Expert Help, you have instant access to over 100 topics while using just 1k of memory. Features include: Auto-lookup, VGA and Mouse Support, Text pasting, Global Searching and much more. Also included are tools that let you create your own Help Files or modify ones that you already have. The LAN version contains a server license with no concurrent use limit. MS-DOS, PC-DOS. Requires a hard disk and 1k of memory w/ 64k EMS. Specify 5.25 or 3.5" diskettes.
List: \$379 Ours: \$341
FAXcetera #: 1863-0007 Return: O
60 day guarantee. Free technical support.

Expert Help Hypertext System Distribution Kit #1 3.0

SofSolutions
Distribution Kit #1 is a toolkit for developing and distributing your own Norton Guides compatible Hypertext systems. With Kit #1, you get the tools to create/modify Help Files and a distribution Engine that can read only the Databases that you specify. You may distribute 100 copies of the Distribution Engine. Kit #1 is perfect for developers with customers that don't require access to the full range of available EH/NG Help Files. Kit refills are available. MS-DOS, PC-DOS compatible. Requires a hard disk. Full 60 day guarantee and free tech support. Specify 5.25 or 3.5" diskettes.
List: \$329 Ours: \$249
FAXcetera #: 1893-0008 Return: O

Expert Help Hypertext System Distribution Kit #2 3.0

SofSolutions
Distribution Kit #2 lets you develop and distribute your own Norton Guides compatible Hypertext systems. Kit #2 includes the tools needed to create Help Files and a license to distribute up to 50 copies of the non-restricted Distribution Engine. This kit is ideally suited for developers with customers who want full access to all available EH/NG Help Files. Kit refills are available. MS-DOS, PC-DOS compatible. Requires a hard disk. Full 60 day guarantee and free tech support. Specify 5.25 or 3.5" diskettes.
List: \$299 Ours: \$229
FAXcetera #: 1893-0009 Return: O
60 day guarantee

On-Line Help 2.0

Opt-Tech Data Processing
Two-systems-in-one that allow you to easily integrate help windows into your applications. The first system is invoked via a call from your program, allowing you complete control of which help window is displayed and the action to be taken when the help window is cleared. The second system is a "memory resident" version that is invoked by "hot keys"; no calls from your program are necessary. Both systems restore the original screen when the help window is cleared and give you complete control over the help window content, size, location and color.
List: \$149 Ours: \$134
FAXcetera #: 1416-0003 Return: L

UpShot 1.1

Autumn Hill Software, Inc.
UpShot is an On-Line Help utility that allows developers and end users to construct and then use large-scale OnLine documentation files, such as manuals, reference books, dictionaries, phone lists, etc. UpShot manuals are like a true book with a Table of Contents, and index and numbered pages. UpShot's access engine can be installed and left resident as a TSR or can be run from the command line as a standard program. UpShot also includes utilities which allow you to build manuals, print manuals on Laserjet printers, capture text screens and alter UpShot's interface.
List: \$175 Ours: \$158
FAXcetera #: 2263-0006 Return: F

REXX LANGUAGE

Portable/REXX kilowatt software

A complete implementation of REXX as specified in Prentice-Hall's book titled "The REXX Language". All standard statements and built-in functions are provided. Additional functions enable the user to maximize productivity in the MS-DOS environment. The product is excellent for developing complex batch scripts REXX parsing capabilities are useful for a wide range of file transformations. Variable pool interfaces are provided for exchanging data with Microsoft C and Borland C/C++ programs. Includes product guide, 360KB of online help, and over 80 online example programs.
Portable REXX List: \$ 70 Ours: \$63
w/opt. P/H book List: \$100 Ours: \$90
FAXcetera #: 1001-4401 Return:

SORT UTILITIES

AUTOSORT 1.29

Computer Control Systems, Inc.
A SORT/MERGE/SELECT utility written in assembly, designed for very large files with fixed-length fields with fixed-length records for fast sorting and high transfer rate. May be used memory resident or linked directly with application program. May be used with MS-DOS compatible networks. File size limited only by DOS/Disk space. Record in excess of 5,000 bytes. Path names supported.
List: \$150 Ours: \$125
FAXcetera #: 1507-0001 Return: N

Opt-Tech Sort 4.0p

Opt-Tech Data Processing
A high performance Sort/Merge/Select Utility. It can be used as a stand-alone utility or called as a subroutine to over 30 programming languages. Process files of any size. Many file types and data types are supported. It can sort, select, or merge on multiple key fields. Other features include duplicate record elimination, reformatting records, use of expanded memory and a comprehensive user's manual. Available for DOS, Windows, OS/2, and UNIX.
List: \$149 Ours: \$135
FAXcetera #: 1416-0001 Return: L

SOURCE MAINTENANCE

codan MS-DOS 2.0 OS/2 2.05 Implements

codan is a C source code analyzer, including a powerful database, built-in reports and interfaces to popular editors for source browsing. Codan's database includes information about functions, variables, files, declarations and more. "...a powerful tool for the professional developer managing data from many large and complex C programs." (Computer Language)
List: \$395 Ours: \$359
FAXcetera #: 2141-0002 Return: F

For return policy details, turn to page 75.

Opt-Tech Sort

If you need to Sort or Select any quantity of data rapidly, then you need Opt-Tech Sort. It is the **High Performance Sort / Merge / Select** utility. Opt-Tech Sort can be used as a stand-alone utility or CALLED as a subroutine to your programs (over 30 languages are supported.)



Files of any size can be processed on multiple key fields. Many file types and data types are supported. Options for selecting a subset of your records, changing record structures, eliminating duplicates, **summing** and many other features are included.

Now Much Faster!! Call for upgrade information
Available for MS-DOS, Windows, OS/2 and UNIX

Buy it from Programmer's Paradise and get a great price. If you have any questions call the Opt-Tech Technical Support Department.

Opt-Tech Data Processing
P.O. Box 678 - Zephyr Cove, NV 89448
Phone: (702) 588-3737 Fax: (702) 588-7576

Look for
Programmer's Paradise®
at COMDEX
Booth #H7442

CodeCheck 2.0

Abraxas Software

CodeCheck Version 2.0 is a program-mable tool for analyzing all C and C++ source code on a file or project basis. CodeCheck is input compatible with all variants of K&R, H&S, ANSI C and C++. CodeCheck is designed to solve all of your portability, maintainability, complexity, reusability, quality assurance, style analysis, library/class management, code review, software metric, standards adherence, and corporate compliance problems.

DOS/Mac List: \$495 Ours: \$470
OS/2 List: \$695 Ours: \$659
Unix List: \$2000 Ours: \$1895
FAXcetera #: 2006-0002 Return: F

MKS Make 2.5

Mortice Kern Systems

MKS MAKE offers users an efficient way to automate the production and maintenance of any project large or small. Automatically regenerates the desired program by understanding the interdependencies among all of the components. Users save valuable time and eliminate needless errors in recompiling. User defined meta-rules allow you to work directly with MKS RCS or other version control systems, handle large object libraries and remotely access files over a network. Includes a UNIX-compatible AR object code librarian, that can be used with libraries generated with Microsoft LIB. The MAKE description file can also be processed, depending on the compiler and environment that MKS MAKE is running under.

List: \$149 Ours: \$125
FAXcetera #: 1634-0003 Return: F

MKS Programming Platform

Mortice Kern Systems

Made up of four members of the MKS software family: MKS Toolkit, MKS MAKE, MKS RCS and MKS LEX & YACC. MKS Toolkit provides the power and flexibility of more than 150 UNIX utilities on DOS or OS/2. MKS Toolkit includes an excellent tutorial manual and an excellent technical reference manual. MKS Toolkit tracks the emerging POSIX/FIPS standard. MKS Make efficiently automates the production and maintenance of any project. User-defined metarules allow you to work directly with MKS RCS, handle large object libraries and remotely access files over a network. MKS RCS (Revision Control System) allows programmers, systems administrators and project managers to control and record revisions to text or binary files. MKS LEX & YACC are construction compiler tools for DOS or OS/2. Together they act as a program generator that takes descriptive input and writes a program module.

List: \$665 Ours: \$538
FAXcetera #: 1634-0009 Return: F

MKS RCS

(Revision Control System) 5.2

Mortice Kern Systems

MKS RCS, now with an advanced user interface enables programmers, systems administrators and project managers to efficiently control and record the revisions to text or binary files such as program source code, manuscripts and catalogs. Resolves access conflicts on a network, preventing programmers from over-writing each other's work. Using reverse delta storage, MKS RCS maintains a complete history of changes, including date and time of change, author and reason for the change. It allows the retrieval of any version of the file, by date, release

number or a user-assigned name.

Unlimited branching from the main family of versions is supported.

DOS List: \$249 Ours: \$205
DOS & OS/2 List: \$399 Ours: \$319
FAXcetera #: 1634-0004 Return: F

Multi-Edit WorkGroup Connection

American Cybernetics

Multi-Edit WorkGroup Connection is designed for the professional development team and contains network versions of: Multi-Edit Professional; Mul-T-LIB (a customized version of Burton Systems Software's TLIB Version Control); and Multi-Mail, a comprehensive Network-E Mail System. Everything is seamlessly integrated and fully customizable.

List: \$895 Ours: CALL
FAXcetera #: 1846-0007 Return: F

Source_Manager 1.10

TransWare Enterprises Inc.

Source_Manager is a source code control program which features revision and version control capabilities, detailed revision history reports and compatibility with CDC's UPDATE utility program. Source_Manager is designed to handle from small to enormously large program source files in a configuration that satisfies the most demanding software quality assurance requirements outlined by ANSI/IEEE, NBS, etc.

List: \$139 Ours: \$125
FAXcetera #: 1000-6301 Return: L

Sourcerer's Apprentice-Version

Control for the Professional

Solution Systems

Version control with single keystroke access from BRIEF. Compare and merge code versions on-screen in BRIEF. Prevent simultaneous updates to source files. Group related files for simplified check-in/out and for release development. Professional version includes Branch/merging for multiple lines of development. Full-featured reporting facility.

List: CALL Ours: CALL
FAXcetera #: 1271-0004 Return: L

SourceSafe Version Control 1.0

Icarus Software

SourceSafe is a powerful, affordable version control system. Features include an unlimited hierarchy of projects; "reverse-delta" histories, including project snapshots and commentary; maintenance of parallel variations of projects; and management of multiple users. Other features include unparalleled ease-of-use and on-line help. SourceSafe eliminates the need for extensive archiving by tracking changes and rapidly regenerating any previous version of a document.

List: \$245 Ours: \$221
FAXcetera #: 1000-7301 Return: O
Lifetime guarantee.

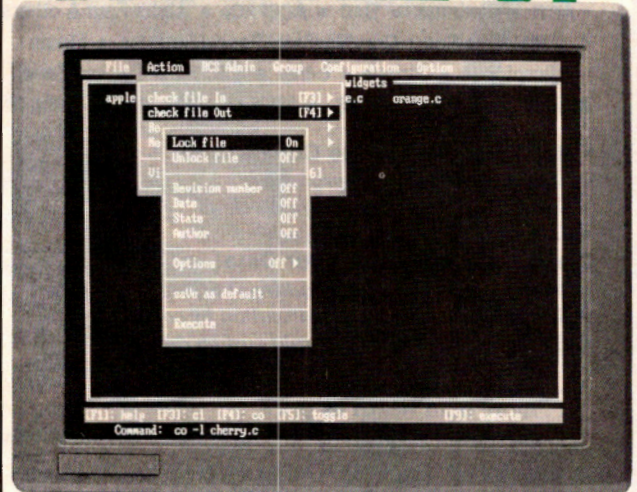
TLIB™ 5.0

Burton Systems Software

A Version Control System for source code, documentation and binary files. It has sophisticated features at an affordable price. It creates and maintains compact, annotated libraries containing all past and current versions of each file and a complete revision history including date, author, comments, etc., for each version. Also check-in/out locking, manual & automatic branching, integration with Opus™ MAKE and Slick™ MAKE, and truly amazing speed.

List: \$139 Ours: \$125
FAXcetera #: 1611-0001 Return: L

TAKE CHARGE OF



CONFIGURATION MANAGEMENT WITH MKS RCS

NEW RELEASE
5.2

Deliver a reliable project on time, on spec, on budget and on target with MKS RCS, the price and performance leader in configuration management solutions. MKS RCS records the complete history of your project's

development and reconstructs any version on command.

Our latest upgrade v5.2 is built to perform on today's complex development architectures and in project team environments:

- ▶ Includes a free MKS Make configuration builder
- ▶ Enhanced security
- ▶ A file format compatible with UNIX RCS
- ▶ A utility to convert PVCS and SCCS files to RCS format
- ▶ Locking convention to avoid access conflicts
- ▶ Superior technical support

With MKS RCS on your team you can manage your whole project in one environment.

MKS

35 King Street North, Waterloo,
Ontario, Canada N2J 2W9

Price: DOS \$249, OS/2 \$349, DOS & OS/2 \$399, 386 UNIX \$349
To order, call: 1-800-265-2797 (continental U.S. only) or (519)884-2251



30 day money back guarantee

MKS and MKS RCS are trademarks of Mortice Kern Systems Inc.
UNIX is a registered trademark of UNIX System Laboratories, Inc.

OS/2

OS/2

OS/2

Software Developers Award

IBM is proud to announce a recognition award for Software Developers who are shipping OS/2 2.0 Exploitive Software Applications.

This award is available to those companies who are currently shipping OS/2 2.0 Software applications or supporting tools.

To be considered for this prestigious award, send us your press materials describing how your software takes advantage of the powerful features and functions of OS/2 2.0 and/or related development tools.

As a recipient of this award your company's name will be featured in selected IBM OS/2 marketing activities throughout the year.

IBM is anxious to receive your OS/2 2.0 Exploitive product information and will promptly evaluate it and notify you of your award eligibility.

Send your press materials to:

OS/2 Awards Center
IBM Corporation
1000 NW 51st Street
Internal Zip 2230
Boca Raton, FL 33432

For questions about eligibility please call 407-982-6408

In Recognition of
your contribution to
a new class of
OS/2 2.0 APPLICATIONS

IBM
CORPORATION

presents an award to

Your Company

for shipping

**Your Software
Application**

OS/2

SEE PAGES 39-41 FOR



SPECIALS!

CODE GENERATORS

DBAPrep 2.10 N Systems

DBAPrep includes an open preprocessor, precompiler, and DBATool for ANSI Embedded SQL development. DBAPrep allows Embedded SQL to be intermixed with C/C++ and generates C API source, supporting standard and extended features, for Sybase, SQL Server, SQLBase, XDB, and Pioneer Software's QE Library (supports Oracle, Informix, DB2, EE DBM, NetWare SQL, dBASE, Paradox) and others. DBATool generates Unique/Entity/Referential Integrity Rules, ER Diagrams, # defines, Include Files, Data Dictionary from the Schema and more. Available for Win/DOS/OS/2, UNIX, VMS, MAC.

List: \$395 Ours: \$349
FAXcetera #: 1002-0091 Return: L

Gpf—GUI Programming Facility 2.0 Gpf Systems, Inc.

Gpf is a fully integrated WYSIWYG OS/2 PM development environment. Gpf generates well structured ANSI C from your design. The WYSIWYG GUI designer offers complete client area support of Controls, Icons/Bitmaps, User Controls, fonts, colors, etc. Built-in user logic, and extended contextual help are linked to controls and menus as they are created. Built-in functions to fill list/combo boxes from SQL DataBase tables. Fully supports the new CUA 91 controls—Notebook, Slider, ValueSet, and Container.

List: \$995 Ours: \$845
FAXcetera #: 3582-0001 Return: N

OS/2 PM Switch-It™ Code Generation Module Blue Sky Software

OS/2 PM Switch-It™ Code Generation Module allows WindowsMAKER Professional to generate optimized high quality C source code for OS/2 Presentation Manager. WindowsMAKER Professional 4.0 allows for Switch-It™ Code Generation Modules. Each Switch-It™ Code Generation Module contains a knowledgebase for generating code for a specific platform using TrueCode technology. TrueCode technology guarantees that the user's own code is

never modified by the code generator. Applications may be migrated across platforms and languages.

List: \$495 Ours: \$445
FAXcetera #: 2602-0011 Return: F

ToolBook 1.0

(for OS/2 Presentation Manager) Asymetrix Corporation

A software construction kit to build custom applications for OS/2 Pres. Mgr. more quickly and easily than with traditional computer languages. You can build graphical applications such as: computer-based training, flat-file databases, data-base front-ends, prototyping, simulations, and interactive presentations. Includes OpenScript®, a powerful object-oriented programming language. OpenScript is a complete, extensible language with custom functions, DDE and DLL support.

List: \$395 Ours: \$345
FAXcetera #: 2776-0002 Return: L

WindowsMAKER Professional Code Generator for OS/2 PM Blue Sky Software

Snap-on code generation module allows WindowsMAKER Professional to generate C code for OS/2 Presentation Manager.

List: \$995 Ours: \$795
FAXcetera #: 2602-0007 Return: L

zApp for OS/2 2.0

Inmark Development Corporation
zApp for OS/2 2.0 is a C++ Application Framework that frees you from the complex details of programming in OS/2 PM and gives you single source code capability with MS Windows, DOS, and UNIX X.MOTIF. zApp's over 130 objects deliver you to Dialogs, Windows, Controls, Menus, Fonts, Graphics, Bitmaps, MDI, Printing, Memory Management, DDE, Object Persistence and Forms. Comes with source code. Bundled with zApp for windows with source.

List: \$695 Ours: \$619
FAXcetera #: 1000-6402 Return: F

DATABASE

Q+E Database Editor (Q+E), Server Database Edition for OS/2 2.6 Pioneer Software

Over 2 million Windows users rely on Q+E to bring data to their desktops! Q+E can directly access, Query and edit database information stored on PCs, LANs and mainframes in 14 database formats. Then Q+E can easily integrate data into any spreadsheet, word processor, desktop publishing or business graphics application for OS/2. Supports dBASE, Oracle, Ingres, Btrieve, OS/2 EE DBM, SQL Server, NetWare SQL, SQL Base, DB2, XDB, Sybase, Excel, ASCII test files. Windows version available.

List: \$299 Ours: \$269
Five User License List: \$999 Ours: \$899
FAXcetera #: 2625-0101 Return: F

Q+E Database Editor (Q+E), Standard Edition for OS/2 2.6 Pioneer Software

Over 2 million Windows and OS/2 users database formats: Oracle, Ingres, dBASE, Sybase, OS/2 EE DBM, SQL Server, NetWare SQL, Btrieve, XDB, SQL Base, Excel, ASCII. Distribution agreement may apply. Windows version available.

List: \$399 Ours: \$359
FAXcetera #: 2625-0102 Return: F

DEBUGGERS

Periscope/Remote for OS/2 (V.1.X) Periscope

Provides full-screen, source-level support for debugging Base and PM device drivers under OS/2 1.2 or 1.3. Operates at the systems level (ring 0) with minimal impact on the system being debugged. Offers easy access to any memory location in the system, and can coexist with an applications level (ring 3) debugger. Requires two systems, the host system runs regular periscope software in DOS. It acts as the debugging system. The second system, the target, runs Periscope/Remote and the software you are debugging. The two systems are connected together via a null-modem cable. Periscope Model IV hardware can be added for real-time debugging of the target system. 32-bit support will be available with the release of OS/2 2.0.

List: \$195 Ours: \$176
FAXcetera #: 1576-0006 Return: L

Periscope/32 for OS/2 (V.1.X) Periscope

Periscope's device driver debugger for OS/2 version 2.0. This full-screen symbolic and source level debugger will significantly increase productivity for Developers of OS/2 2.0 Base and PM drivers. The debugger operates at the systems (ring 0) level with minimal impact on the system being debugged. It will offer easy access to any memory location in the system, and is compatible with an applications (ring 3) level debugger. Periscope/32 for OS/2 2.0 requires a host system (with an 80386 or higher CPU) and target system (running OS/2 2.0) connected by null modem cable. Includes host and target software, as well as break-out switch for crash recovery.

List: \$395 Ours: \$401
FAXcetera #: 1576-0009 Return: L

SMALLTALK LANGUAGE

Smalltalk/V PM

Digitalk
Smalltalk/V PM is a fully integrated object-oriented development environment for OS/2 PM. It produces fully compiled executables incrementally, and includes the ability to create PM objects easily and quickly. The system includes thousands of reusable objects, a pushbutton source-level debugger with single-stepping and object inspection, DDE support, multitasking and more. Smalltalk/V PM can call DLLs written in other languages, and is code compatible with all other Digitalk Smalltalk/V environments. All Smalltalk/V PM source code is included.

List: \$500 Ours: \$395
FAXcetera #: 1469-0004 Return: L

TESTING TOOLS

SQL:Replay Software Quality Automation

SQA: Replay is a macro reorder for OS/2 applications. SQA: Replay can easily record keystrokes, mouse movements and button clicks for replay at any time. Other features include full-screen or windows mode, variable speed playback, wait states, automatic window capture and repositioning, and more. SQA: Robot, a full-featured automated test regression tool.

List: \$99 Ours: \$89
FAXcetera #: 1000-1803 Return: L

SQA:Robot for OS/2 2.0 Software Quality Automation

A menu-driven record/capture/playback tool designed to automate performance and regression testing for OS/2 PM. With a simple point and click SQA: Robot begins recording every action within the application. Keystrokes, mouse movements and window positions become part of a script which can be played back to verify that an application is performing correctly. Robot can test for the existence of files, window, and tasks; and compare test results with baselines. Test procedures can be saved for unattended execution.

List: \$995 Ours: \$899
FAXcetera #: 1000-1802 Return: O

ADDITIONAL OS/2 TOOLS

ObjectPM Raleigh Systems

Object oriented software design, and OS/2 are premier technologies of the 90's. Together they allow applications to be created of incredible sophistication and power. ObjectPM is a C++ class library that provides the means for creating such applications. ObjectPM is the first class library that is geared specifically for OS/2 and the Presentation Manager. It provides over 120 classes of objects encapsulation windows, controls, graphic tools, forms, threads, and much more.

List: \$499 Ours: \$439
FAXcetera #: 1002-0801 Return: L

OS/2-Server for OS/2 JetForm Corporation

Prints forms designed with JetForm Design in multi-user & network applications. Merge variable length data, any client LAN including JetForm Filler can request forms & data merge services, one request can print multiple forms on multiple printers. 20-user included.

List: \$1695 Ours: CALL
Unlimited: \$3495 Ours: CALL
FAXcetera #: 0020-5205 Return: O

CHECK OUT OUR



SAVINGS!

See Pages 37-38 &
44-46 for Articles on
developing on OS/2!



Join us for the 4th annual series

Windows & OS/2 Conference

Get a Clear
View of
Windows
and OS/2
At Work

Winter

January 20-22
San Jose Convention Center

Summer

September 15-17
Boston's World Trade Center



Mail or Fax this
coupon to us at:

CM Ventures, Inc.
5720 Hollis Street
Emeryville, CA 94608
Phone: 1-510-601-5000
Fax: 1-510-601-5075

☒ I'm Interested!

Please rush me information on: ☐ Conference Program ☐ Exhibiting
☐ January 20-22, 1993, San Jose ☐ September 15-17, 1993, Boston

Name: _____ Title: _____
Company: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____

Please indicate others at your location who should be added to our mailing list
(add additional sheets if necessary):

Name: _____ Title: _____
Name: _____ Title: _____
Name: _____ Title: _____

Windows & OS/2[®]
CONFERENCE

Porting DOS TO applications WINDOWS

Like me, I'm sure many of you have DOS applications that you want to port to Windows. Depending on how your program has been designed and written, you are going to find that a Windows port falls somewhere between one requiring lots of hackwork and one requiring a total redesign and rewrite.

DOS programs are usually written as though they are the only programs running, and they take total control of your machine. They sit waiting for keyboard input, and when it arrives they do some processing, maybe display or print something, and then wait for more keyboard input—effectively tying up all of your machine's resources, keyboard, screen, memory, CPU, disks, and so on. Commonly, the program is in control, and not the user.

Windows and other GUI environments differ considerably from this model. They share resources among many concurrently running programs, and they are driven by the user—not by what the analyst/programmer thinks the user wants to do. This user-driven model is termed 'event-driven programming'. Your program totally relinquishes control to Windows, and calls you when the user (or Windows) wants your program to do something. Gone are the days of sitting and waiting for keyboard input! Such events include pressing a key down, releasing a key, moving the mouse, moving or re-sizing a window, and painting a window. Most events occur through a direct user action, but some, such as timer event, occur for other reasons. When an event occurs, Windows sends your program a message identifying the particular type of event.

Each window you create belongs to a certain class of window. This provides a window with some basic foundation elements, one of which is the 'window procedure'. The window procedure is a function you write to process all messages for a particular window class. When Windows wants to send a message to a window, it looks up the window's class and sends the message to its window procedure (Windows has around 300 different messages).

Changing your program so that it works using this event-driven model is likely to be your biggest challenge. If your program has been well-designed with all keyboard input focused in a single module, and likewise screen display routines, you're in for a great deal of work. You don't call Windows and ask if a key has been pressed, it calls you when a key has been pressed.

Apart from putting the user in control, this event-driven model allows Windows to run other programs using what it



terms 'co-operative processing' or 'multi-tasking'.

Many DOS applications are character or text-based and this may be your next hurdle. Windows is a graphical operating system and does a great job of displaying lines, pixels, and so on. However, when it comes to straight text, things are probably somewhat more complicated than you are used to.

Windows treats text as graphics, and you must specify everything in pixel coordinates, not simple line and column numbers. Windows also has a wide selection of

fonts, font sizes and styles from which you can choose. The type and size of font must be used to determine the pixel location for each character. Also, Windows does not have functions to clear to the end of the line, or window, insert or delete lines, or read characters back from the screen.

These operations can all be carried out, but require extra effort. Again, if you have low-level display code sprinkled throughout your program, you're in for a lot of work.

Windows normally uses proportionally spaced fonts, and this opens up a new set of problems. Depending on your requirements, you can, however, still use fixed pitch fonts. Menus are a common way of letting the user select commands. If your program already uses pull-down menus, adapting it to Windows should be quite straight forward. Windows programs also make heavy use of dialogue boxes. A dialogue box groups together user information necessary to control some aspect of the application in a standardized fashion. It's unlikely that your DOS program uses dialogue boxes, and it will need to be altered in order to incorporate them. They are an important aspect of the common look and feel of Windows applications, and require a well-designed layout.

Windows programs should conform to the Common User Access standard (CUA) for their user interface. Detailed information on CUA can be found in the CUA Advanced Interface Design Guide, included with the Microsoft Windows SDK, available from IBM.

Windows resources allow you to bundle menus, dialogue boxes, icons, bitmaps and strings, together in one place, instead of coding them through your application. This makes support for international versions of your programs easier, and also allows someone other than the programmer to develop and maintain these resources. A resource compiler is used to compile the resources and attach them to the final executable program.

Writing

Cross-Platform

Applications with **NEW** Visual Basic for MS-DOS

PROFESSIONAL EDITION

BY

STEVE PODRADCHIK

Developers can write applications that compile for either text-mode MS-DOS or Windows by combining new Microsoft Visual Basic for MS-DOS with Microsoft Visual Basic for Windows.

The applications will look and feel similar in both operating systems—movable windows, icons, menus, controls, drag and drop, etc. Code can be written that compiles for all machines from the earliest PC/XT to a 486. The Professional Edition of VB/MS-DOS also has the power features required to create world-class MS-DOS applications such as a native 80x86 compiler, stand-alone .EXE files, 386 code generation, an integrated database engine (ISAM), and MOVE overlays. VB/MS-DOS applications can be a combination of Basic code and C, C++, MASM, or FORTRAN libraries. Microsoft Quick BASIC and BASIC Professional Development System users will be especially pleased that VB/MS-DOS runs their existing code unmodified.

The following is divided into two sections. The first section explains the VB/MS-DOS product and the second outlines writing portable applications using VB/MS-DOS and VB/Windows together.

What is VB/MS-DOS?

Put simply, the Standard Edition of VB/MS-DOS is a highly productive way to create MS-DOS applications that are easy to port to and from Windows. The Professional Edition of VB/MS-DOS goes further and adds the speed, capacity, and database access that professional development requires.

High Productivity / High Compatibility with Visual Basic for Windows

Like its very successful Windows counterpart, VB/MS-DOS offers high productivity by combining rich user interface design tools with a flexible event-oriented programming language. Standard Windows graphical elements (controls) display as text-mode equivalents. Developers use a mouse or keyboard to draw the user interface from a toolbox of the same 15 controls that Visual Basic for Windows introduced. Each control has certain properties (color, size, visible, enabled, dragmode, etc.), can invoke methods (Hide, Move, Show, etc.), and responds to events (Click, KeyPress, GotFocus, etc.). Even sophisticated user-interfaces require surprisingly little code because each control has significant built-in functionality — text boxes, edit text, scroll bars, scroll, command buttons, click, menus, pull down, and so on. Developers specify what happens when a control detects any of these events. VB/MS-DOS and VB/Windows are highly compatible therefore, because they share the same programming paradigm. VB/MS-DOS includes extensive documentation and various software tools that facilitate porting in either direction.

A multi-window, syntax-checking development environment further enhances programmer productivity. Extensive use of EMS/XMS memory and overlays makes it possible to edit and run very large applications within the

edit/debug environment. The environment can even be "tuned" by adjusting the overlay heap to trade performance for capacity. Compiled and linked code libraries written in Basic, C, C++, MASM, or most other languages can extend the VB/MS-DOS language with new functions that operate at the speed of native code. VB/MS-DOS users will also appreciate a strong set of debugging tools such as an unlimited number of breakpoints, single stepping by line or procedure, watch variables, conditional breakpoints, output and calling sequence windows. The Microsoft Source Code Profiler (included) makes performance tuning easy. VB/MS-DOS Professional also comes with the Microsoft CodeView 4.0 debugger for mixed-language debugging and tuning generated assembly instructions.

Finally, a wide variety of toolkits and sample applications enhance productivity even more. The modular nature of Visual Basic makes it easy to add these toolkits and samples into new applications and the included source code allows a developer to customize them. The Common Dialog Toolkit has fully functional, fully tested dialogs for Open, Save, Print, Find, Replace, About, and Color Picker. The Help Toolkit uses standard ASCII files to add hypertext Help to applications. The Charting toolkit includes routines to draw pie, bar, column, line, and scatter charts. The Font Toolkit combines several Bitstream fonts with rastering routines written in assembly (Additional fonts can be purchased from Bitstream). Professional installation programs are easy to create

with the Setup Toolkit. The sample applications include a notepad, a calculator and a clock. Finally, the on-line Help system includes thousands of lines of sample code that can be pasted into applications.

Speed and Capacity

Of course, productivity is most relevant where the finished .EXE files have the performance developers demand. VB/MS-DOS Pro was optimized for performance and the results speak for themselves (see Benchmark sidebar). There are many reasons for the speed, but a compiler that creates native 80x86 executables deserves most of the credit. The compiler generates 8088, 8086, 80286, and even 80386/80486 code (a first for Microsoft compilers). The compiled .EXE files can be either 100% stand-alone or can require a royalty-free runtime library.

High-speed data manipulation was another top priority. Developers using floating-point math can choose from two floating-point libraries. One is optimized for 387-equipped machines and emulates a 387 if not present. The other library is tuned for machines without a coprocessor so it performs up to 300% better than the 387/emulator library on such computers. Perhaps even more importantly, VB/MS-DOS Pro integrates a high-speed database engine (ISAM) directly into the language. One command can index up to 128MB of data or retrieve a complex record. Many third-parties also make add-on ISAMs that read/write xBASE and Btrieve files or communicate with SQL Server.

Applications are not to be constrained by 640K MS-DOS limitation. VB/MS-DOS Professional executables can be as large as 16MB because the compiler can make use of the same MOVE overlay technology that Microsoft C/C++ 7.0

introduced. Multiple overlay segments automatically swap in and out of conventional memory. MOVE determines if swaps will be to XMS, EMS, or to disk at run-time.

Writing Portable Applications for DOS and Windows

Although VB/MS-DOS is certainly a powerful DOS development tool, the single most important benefit is that it makes writing portable code relatively easy. VB/Windows and VB/MS-DOS eliminate most of the traditional problems in writing portable code by sharing the same built-in 15 control set, using the same event-oriented paradigm and employing compatible versions of Basic. Some difficulties still remain, however. These fall into four general areas: Windows vs. MS-DOS system services, custom controls and add-on libraries, graphics vs. text modes, and language differences between the two versions of Visual Basic.

Operating System Services

Windows and MS-DOS provide the developer with different built-in services. Applications that are highly reliant on operating system services will be the most difficult to port. For example, Windows applications may use DDE to exchange information. In MS-DOS, data files can replace DDE in some instances; add-on libraries can replace DDE in other applications. A VB/Windows application that uses Microsoft Excel and DDE to chart information would have to be changed to use a charting library (such as the Charting Toolkit that comes with VB/MS-DOS Professional).

Clearly, translating Windows API calls to MS-DOS could be a challenge. But consider the common Windows API calls

bit blitting, DOS functions, etc. Many of these are unnecessary in a text-mode environment or are available through the Basic language. And programmers will be surprised by some of the Windows functions that VB/MS-DOS does support such as Drag and Drop, Icons and the Clipboard. Likewise, a VB/MS-DOS application with several DOS interrupts and direct COM/LPT access can prove difficult to port to Windows. For all of these challenges, the best strategy is to avoid unnecessary operating system reliance but there are certainly places where code needs to be different.

Some simple cases can be handled in-line by checking the width of the screen at runtime (always 80 characters under MS-DOS and 9600 twips for VGA Windows) and by branching accordingly. Isolating operating-specific code into different modules is appropriate in other places. For example, a communication program developer would probably encapsulate all COM functions into procedures that reside in one module. He would develop one COM module for MS-DOS and one for Windows. The developer would just use the COM module appropriate for the target platform when making an .EXE file.

Custom Controls and Add-on Libraries

One of the most important reasons for Visual Basic for Window's success must be that the development environment has extensive custom controls and add-on libraries. Visual Basic for MS-DOS is extensible in similar, but not identical ways. Clearly, VB/MS-DOS cannot call Windows Dynamically Linked Libraries (DLLs). These should be replaced by statically linked libraries (LIB files) to gain comparable functionality. For most developers, the main problem will simply be ordering matching sets of LIBs and DLLs.

Both VB/MS-DOS and VB/Windows support custom controls but the internal structures are very different and so are not binary-compatible. As with DLLs vs. LIBs, the most serious problem to most developers will be ordering matching sets of custom controls. VB/MS-DOS Professional comes with a 48-page add-on catalog that lists all the popular database, graphic, language, and communication add-ons, as well as over a dozen VB/MS-DOS books.

Test	VB/MS-DOS Pro	Borland Turbo C++ 3.0	Borland Turbo Pascal 6.0
All times in seconds Lower is better. All tests run on Compaq 386/33.			
Elkins Factorial	6.2	5.0	5.1
Elkins Floating Pt.	2.4	4.0	4.3
File I/O	47.5	35.0	24.8
Multiply/Divide	0.7	2.0	1.8
Savage	22.3	44.0	49.0
Screen	0.8	6.0	.9
Sieve	4.0	3.0	4.3
Average Score	12.0	14.1	12.9

Graphics vs. Text Modes

The most visible difference between VB/MS-DOS and VB/Windows is that VB/MS-DOS forms are strictly text-mode for maximum speed and minimum memory consumption. VB/MS-DOS includes a form translation utility that translates binary VB/Windows forms to binary VB/MS-DOS forms and vice versa but there are other issues. The first problem is that more information fits on a VGA bit-mapped display with proportional fonts than on a 25 X 80 mono-spaced text screen. The easiest solution is to create VB/MS-DOS applications that run in the 43- or 50-line modes that EGA and VGA displays allow. The second major difference is that VB/MS-DOS cannot display graphics while forms are visible although it can draw full-screen graphics. For the most part, the same commands (LINE, CIRCLE, CLS, PSET, etc.) draw graphics in either VB/Windows or VB/MS-DOS. The only major difference, therefore, is that a developer must design a VB/MS-DOS program such that

users can toggle between graphics and forms. The new SCREEN.HIDE and SCREEN.SHOW methods facilitate this. SCREEN.HIDE temporarily hides all forms and allows full-screen graphics. SCREEN.SHOW restores the forms.

Language Differences

Finally, there are some Basic-language differences between VB/MS-DOS and VB/Windows. These are due to the fact that VB/MS-DOS is absolutely backward-compatible with existing Microsoft QuickBASIC and BASIC Professional Development System. The VB/MS-DOS language is essentially a union of the VB/Windows and BASIC PDS languages but there are a few conflicts. VB/MS-DOS includes a translation utility that handles most of these and the VB/MS-DOS manuals carefully document compatibility issues.

Conclusion

Writing applications that compile for either MS-DOS or Windows is made not only possible but easy by combining

VB/MS-DOS and VB/Windows. Although both versions exploit features of their respective operating systems, the cross-platform compatibility is high enough to yield several benefits. The most important is that developers creating MS-DOS applications today can use VB/MS-DOS to write MS-DOS applications that will move easily to Windows. Likewise, Windows developers can broaden their market to the millions of machines not using Windows. And developers who create both MS-DOS and Windows applications are in for a real treat! ♦

Steve Podradchik is the product manager for Microsoft Visual Basic for MS-DOS. Previously he worked on the Microsoft QuickBASIC and database teams and has written several vertical applications in BASIC and in other languages.



There's something important in your delivery besides software.

Programmer's Paradise has abandoned plastic and foam packing material for more reasons than one. Instead, you'll find PADPAK®, a unique cushioning system designed to protect your shipments as well as protect your environment. Not only is it more environmentally sound, but it can reduce the size of shipping cartons by as much as 25%!

**Biodegradable,
recyclable,
renewable.**

Programmer's Paradise...
Fulfilling your software needs, and more.

8 0 0 - 4 4 5 - 7 8 9 9



APEX

Apex Software Corporation

Only
\$99
until
October 31,
1992

Agility/VB™

Database Manager for Visual Basic

Custom Controls

- Create applications in minutes using custom controls—without writing a single line of code. Controls are hot-linked to data files and are updated automatically.
- **AgiGrid:** An instant, full-featured browser. Editable cells, movable and resizable columns, scroll bars, user-programmable data validation, interactive design-time layout, etc. You have full program control over grid contents/operation.
- **AgiPicture:** Put pictures and images in your database and on your forms. Images stored as Device-Independent Bitmaps (DIBS) for simplified display.
- **AgiButton:** With one click, you can process queries, add/update records, navigate files, etc.
- **AgiText:** Build instant forms by hot-linking text boxes right to the database. Includes edit masks for complete data input control.
- On-line help and sample applications included.

Database Management Power

- Accesses multiple file formats: dBASE, delimited text, and native Agility files. Agility/VB also supports in-memory databases.
- Create databases in memory for look-ups, sharing between applications, etc.
- Provides an easy to use QBE interface with full query optimization.
- Automatically maintains indexes, and converts all data types to VB data types.
- Includes a dBASE file-maintenance tool.
- Store data efficiently using variable-length fields and records in native files.

Hot Views!

- Create 1-to-many, many-to-1 and 1-to-1 relationships graphically with the View Editor. Include multiple file formats in a single view. Use a view just like a flat-file database—no need to change your code when using views.
- Use views in **any** Agility program— you can even access a view with the custom controls, such as AgiGrid.

Programming Features

- Write your own field-validation routines for Agility's grid and text controls.
- Easily access the database structure for all file formats.
- Take complete control—open and close files, navigate, sort, create/modify data sets, read/add/update records, create bookmarks, etc.
- Retrieve, update, and find data using individual fields or the whole record.
- Choose the data type you want to work with in Visual Basic, and Agility will convert the data you retrieve.
- Save named data sets and queries for later recall.
- Mark individual records for instant retrieval. Ideal for creating lists from data files.
- Use calculated fields in dBASE files.

And Agility/VB Is Royalty Free!~~\$189.00~~

Agility is the Answer.

Apex Software Company

4516 Henry Street,
Pittsburgh, PA 15213
412-681-4343

800-858-APEX

FAX: 412-681-4384



Joan Miro, Queen Louise of Prussia. Oil on canvas. Carnegie Museum of Art, Pittsburgh.

WINDOWS DEVELOPMENT SOFTWARE

BASIC

COMPILERS

GFA-BASIC for Windows

GFA Software Technologies, Inc.
GFA-BASIC for Windows takes full advantage of all new features of Windows 3.1. Includes an Integrated Development Environment with Editor, Compiler, Debugger, Visual Development Tools, etc. GFA-BASIC supports "Pointers" giving you access to all "C" compatible DLL's as well as VB specific DLL's in addition to DDE, MDI, etc. A dBASE engine includes the ability to access, lock, update, and append dBASE III/IV records using indexes.

List: \$295 Ours: \$235
FAXcetera #: 3614-0002 Return: L

GFA-BASIC "QB" for Windows

GFA Software Technologies, Inc.
GFA "QB" for Windows is designed to facilitate the porting of QuickBASIC programs to run under Windows with a minimum of effort. GFA-BASIC includes a programmer guide, reference manual, and special utilities which simplify the conversion of other Basics to GFA—especially QuickBASIC. The system features access to all new Windows API calls for Object Linking and Embedding (OLE), Multi-Media, TrueType scalable fonts, as well as GFA commands for Printer, File, Color, and Font Selectors. Also includes a Resource Editor, Integrated debugger, context-sensitive On-Line Help, and royalty-free distribution.

List: \$99 Ours: \$90
FAXcetera #: 3614-0003 Return: L

Microsoft Visual Basic Microsoft Corporation

Create Windows applications quickly and easily with graphical user interface design tools that make creating the user interface as easy as clicking on an object in the toolbox and placing and sizing it in a window. Provides a powerful development environment including incremental compilation, automatic syntax checking and integrated debugging.

List: \$199 Ours: \$139
FAXcetera #: 1269-0033 Return: F

Microsoft Professional Toolkit for Visual Basic

Microsoft Corporation

The professional Toolkit for Visual Basic includes programming tools and controls for creating full-featured applications for Windows. Includes Windows for Pen computing, Multimedia, grids, graphing and OLE support, plus tools like the Windows Help Compiler, online Windows API reference, and over 150 informative articles from Microsoft development support.

List: \$495 Ours: \$337
FAXcetera #: 9269-0040 Return: L

REALIZER

Computer Associates

REALIZER is a Complete Application Development Environment for Windows. REALIZER combines Programmable Application Tools, the FormDev visual form designer, and a structured superset of BASIC extended to access Windows object resources. Develop a complete Windows application without the SDK, quickly and easily.

List: CALL Ours: CALL
FAXcetera #: 1004-0008 Return: O

COMMUNICATIONS

PDQComm for Windows 1.0

Crescent Software, Inc.

Add serial communications to Visual Basic with full hardware and software handshaking. Includes XMODEM and ASCII file transfers, and many terminal emulations. Uses standard BASIC syntax requiring minimal changes to existing programs. Requires Microsoft Visual Basic.

List: \$99 Ours: \$89
FAXcetera #: 1572-0013 Return: L

DATABASE/FILE MANAGEMENT

Agility/VB

Apex Software Corporation

Complete database manager for Visual Basic. Create applications quickly—includes grid, text, and picture custom controls to eliminate coding. Effective command set for program control over database operations. Graphical tool to define complex file relationships. Built-in query-by-example. Supports dBASE file formats as well as native format for variable length data. Database-specific detail hidden from Agility/VB applications. Once written, an application will work with all supported file formats.

List: \$189 Ours: \$89
FAXcetera #: 1915-0001 Return: F



SAVINGS!

DATABasic

Blue Rose Software, Inc.

Designed by and for BASIC users. B-trees. Hash key indexing with average 1.6 I/O seek time. Multiple keys per file. Multiple fields per key. No packing. Automatic index updates. 4 gigabytes files. Top rated manual. Design tool. Works with QB, VB and PDS. Fast and compact, DATABasic is the definitive tool for the serious BASIC programmer.

List: \$249 Ours: \$224
FAXcetera #: 10002-8701 Return: L

Q+E Database/VB (QEVB)

Pioneer Software

The complete multi-user database for Visual Basic! QEVB makes it simple to develop Windows applications by adding a set of database Custom Controls to the VB toolbar. These enable you to build complete multi-user database applications without writing a single line of VB database code. Stores pictures directly in the database. Supports record-locking and 256-colors. Works with any dBASE-compatible file or index. Creates new dBASE files and indexes. dBASE is not required. And QEVB is royalty-free!

List: \$99 Ours: \$89
FAXcetera #: 2625-0099 Return: F

SPECIAL BUNDLE OFFER

Q+E Database/VB \$169

MS Visual Basic \$139

\$308

NOW ONLY \$279

GFA-BASIC "QB" for Windows.

Low cost and easy to learn for casual users, yet powerful enough for professionals.

If you know BASIC and want to write programs for Windows, or have QuickBASIC programs to port to Windows, GFA-BASIC "QB" is one tool you don't want to be without.

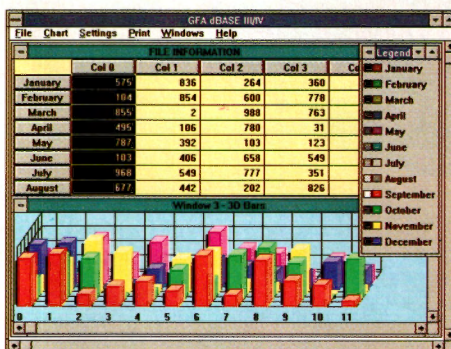
Easy to use for the casual programmer

- ☐ Context sensitive on-line help, cut and paste example code into editor.
- ☐ Draw Windows GUI with mouse using GFA's Visual Development Tool.

Powerful enough for professional developers

- ☐ Over 800 commands and functions.
- ☐ Advanced graphics library does spline, stretch, Bezier curve, and more.
- ☐ Advanced Math functions for statistics, trigonometry, and more.
- ☐ Direct COM port access without additional libraries.
- ☐ Arrays up to 20Mb, including a full set of Matrix commands.

To order your copy of GFA-BASIC "QB" at this special price, contact GFA Software at 800-766-6GFA. Comes with a 90-day money-back guarantee.



Optional dBASE engine includes functions for reading, updating, deleting, and locking dBASE III/IV records and indices.

"Its language features make GFA-BASIC a far more powerful tool than VisualBasic. All but a few Windows specific calls written in GFA-BASIC for Windows can be ported to GFA-BASIC for DOS. You can create a DOS application in either text or graphics mode, complete with multiple windows, menus, and scroll bars..." *PC Magazine*, 6/16/92

"I moved 200K of QuickBASIC program files to GFA in four days." ...Bill Mongan, THE NEW ENGLAND.

To Order Call Programmer's Paradise®
1-800-445-7899



Database/VB

See Bundle
Offer on
page 138

Now anyone can create complete multi-user database applications without writing code.

A complete database.

Q+E Database/VB (QEVb) is a quick and easy multi-user database designed from the ground up for Visual Basic. It adds all the functions you need to create, delete, read and write databases from within Visual Basic.

Custom controls eliminate code.

QEVb has a complete set of database custom controls that allows you to quickly create database applications (like the one pictured here) without writing code. For example, scroll bars that automatically scroll through your database records are just a point and click away.

Create multi-user applications.

QEVb has built-in record locking so you can put your database applications on a network.

Database management capabilities.

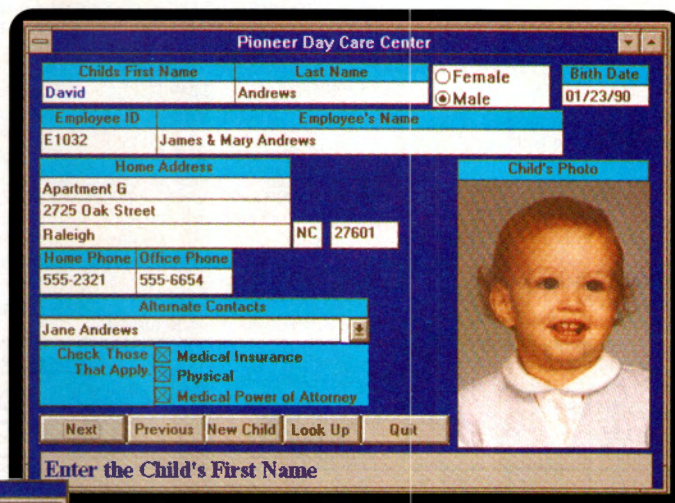
QEVb has all the database management functions you'll ever need, and it's dBASE compatible. Use the databases you already have or create new ones. You can even store pictures directly in your database.

5540 Centerview Drive • Suite 324 • Raleigh, NC 27606
919 859-2220 • Fax 919 859-9334 • 800 876-3101

In Europe: Marten Meesweg 99 • 3068 AV Rotterdam
The Netherlands (31) 10 2202 022 • Fax (31) 10 4563 348

pioneer
SOFTWARE

The Multi-Database
Technology Company



Using QEVb is easy!

- Use the QEVb Query custom control to link to the databases you want.
- Use the QEVb controls (Text Box, Picture Box, Radio Button, List Box, Check Box, Combo Box) to display or update database values.
- Use the QEVb Command Button control to specify database functions. For example, we've defined a "Previous" button to retrieve the previous record in the database.
- Add labels like "Child's First Name" over the database fields.
- Now run your application. **Royalty Free!**

QEVb Custom Controls

The QEVb controls add built-in database functionality to the standard Visual Basic controls. The following two custom controls are unique to QEVb.



The Query control links your application to databases.



The Query Grid control lets you browse your database records.

NO RISK
30-DAY MONEY BACK
GUARANTEE

\$199

SUGGESTED RETAIL
CALL 800-876-3101

WINDOWS DEVELOPMENT SOFTWARE

VBPX 1.0

AKROS, Inc.

VBPX is an application development tool that provides a seamless interface between Visual Basic and The Paradox Engine. With VBXP, developers can create sophisticated database applications by integrating the power of Paradox tables with the simplicity of Visual Basic. Using standard Basic function calls, the developer has total control over Paradox tables. Complete table and row locking is supported for multi-user applications. A comprehensive Visual Basic/Paradox table management application (w/source code) is included and provides examples of virtually all available functions.

List: \$129 Ours: \$116
FAXcetera #: 1002-5001 Return: L

Visual/db 2.0

AJS Publishing, Inc.

A complete single-user relational Database Management system for Visual Basic. Routines create, read, and write industry-standard dBASE-type database (DBF), index (NDX), and memo (DBT) files. Implemented entirely in Visual Basic source code. Contains ready-to-run data management forms: Create, Index, Browse, and Append, and a built-in Query Processor.

List: \$149 Ours: \$134
FAXcetera #: 2113-0002 Return: L

GRAPHICS

ChartBuilder for Visual Basic 2.0

Pinnacle Publishing, Inc.

You can design a chart in minutes using ChartBuilder's easy-to-learn properties. At runtime, you just send the current VB data to ChartBuilder to produce the final graph.

List: \$149 Ours: \$135
FAXcetera #: 1794-0010 Return: O
Full 60 day guarantee.

LIBRARIES

Financial Library/VB 1.0

TeraTech

Financial Library/VB adds over 70 financial functions to Visual Basic. All functions are quick and accurate to 13 digits. Calculate simple, compound and discounted interest. Annuities Due and end of period annuities. Cashflow and depreciation analysis. Treasury bond yields. "123" financial functions. Package includes full source code and examples. No royalties. Requires Visual Basic.

List: \$299 Ours: \$269
FAXcetera #: 1972-0016 Return: F

Dazzle/VB 1.0

TeraTech

Display images in Windows with Dazzle/VB image library for Visual Basic. Fade and wide your pictures using one of the many special effects available. Zoom, pan and adjust colors in your picture using custom control properties for the ultimate in graphic control. Break VB's 16 color barriers! No royalties. Requires Visual Basic. Hard disk requires 1Mb space.

List: \$299 Ours: \$249
FAXcetera #: 1972-0009 Return: F

Dazzle/VB Professional 1.0

TeraTech

Dazzle/VB Professional version includes all the features of Dazzle/VB and adds gray scale support, on the fly compression, extended color support and palette control.

List: \$499 Ours: \$425
FAXcetera #: 1972-0009 Return: F

ProMath/VB 1.0

TeraTech

Collection of 150 mathematical functions and routines. Included are trigonometric, hyperbolic, Airy, factorial, gamma, error, beta, Fresnel, and integration, differentiation, differential equations, Fortran functions, FFTs, roots of equations, graphics and more. No royalties. Requires Visual Basic. Hard disk requires 1Mb space.

List: \$125 Ours: \$109
FAXcetera #: 1972-0003 Return: F

VB Lite

TeraTech

Controls printers, access communication, sort and search arrays. Write a database application in VB using B-tree indexing. No royalties. Requires Visual Basic. Hard disk required. 1 Mb space.

List: \$125 Ours: \$109
FAXcetera #: 1972-0014 Return: F

QuickPak Professional

or Windows 1.0

Crescent Software, Inc.

The most complete set of subroutines, modules, custom controls, and examples for Visual Basic. Includes complete set of financial and scientific functions, searching and sorting for all array data types, including multiple keys, fast file I/O, and much more. All low-level routines written in assembler for efficiency. Full source included. Requires Microsoft Visual Basic.

List: \$199 Ours: \$179
FAXcetera #: 1572-0014 Return: L

C/C++

COMPILERS

Microsoft QuickC for Windows

Microsoft Corporation

A completely integrated development system for the Windows environment, including a fully integrated Windows-hosted debugger. The package provides all the tools that you need to write Windows programs, including resource editors, a resource compiler, and the C runtime library for Windows. In addition, QuickC for Windows includes QuickCase-W, a graphical program designer that lets you design and generate code for a program's main window, menu bar, pull-down menus, dialog boxes, icons and cursors. Generates Windows .EXEs, Windows .DLLs, QuickWin applications, and DOS.EXEs.

List: \$199 Ours: \$139
FAXcetera #: 1269-0034 Return: L

Turbo C++ for Windows

Borland International

Creating Windows programs becomes fast and simple with Turbo C++ for Windows. Powerful, intuitive, point-and-click tools streamline Windows programming and make it simple even if you've never programmed in Windows before! The Windows IDE lets you edit, compile, and run your programs all from within Windows. ObjectWindows application framework delivers ready-made graphical user interface that you can plug right into your application with just a few lines of code. Resource Workshop lets you create great Windows resources visually, and color syntax highlighting makes it easy to read your code and spot errors. For C/C++ programming in Windows 3.0 or 3.1.

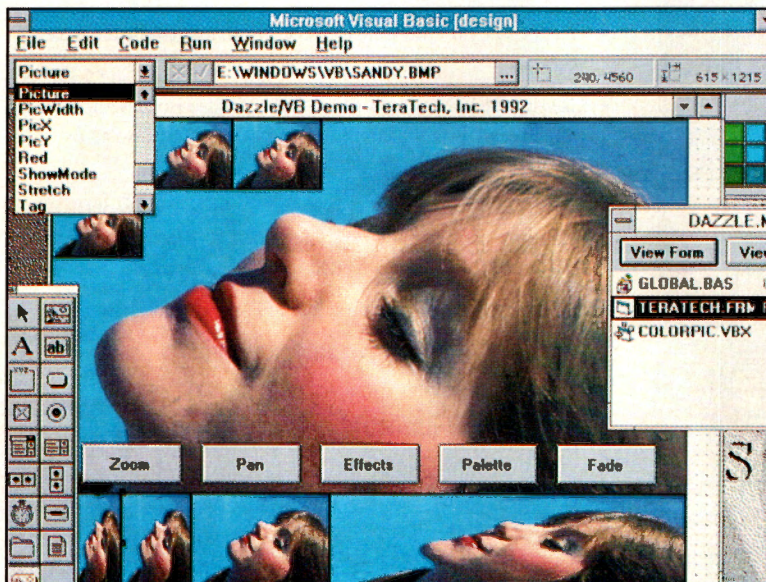
List: \$150 Ours: \$113
FAXcetera #: 1861-0026 Return: F



DON'T DELAY!!
CALL 800-445-7899
TO ORDER TODAY!

New Dazzle/VB™ image control!

Just \$99 until November 30!



*With Dazzle, the only limit is
your imagination!*

Order Now! (800) 447-9120 ext. 170

Display realistic 256 color images in Visual Basic! Break Visual Basic's 16 color barrier! Effortlessly zoom, pan and adjust colors using custom control properties! Draw lines, boxes, circles and fonts anywhere! Flood fill areas and even transform your image with one of 30 customizable screen wipes! **Dazzle/VB™** is the **only** true image display custom control for Visual Basic. This means that you can get your Windows™ application started without programming! But when you need to program for greater control, you can! And until 11/30/92 you can **save \$200 off Dazzle's list price!**

Also **math, financial and communications** Visual Basic products available. Call for details.

TeraTech, Inc.

Tools for Programmers

3 Choke Cherry Road, Suite 360
Department 154, Rockville, MD 20850
Int'l: +1 (301) 330-6764 • FAX: (301) 963-0436
BBS: (301) 963-7478

WINDOWS DEVELOPMENT SOFTWARE

CODE GENERATORS

CASE:W Corporate Edition for MFC 4.0 CASEWORKS

CASE:W Corporate Edition for MFC cuts the time it takes to learn and develop Windows applications using Microsoft's Foundation Classes (MFC) C++ class libraries. CASE:W CE for MFC includes a WYSIWYG Designer that allows the programmer to "Draw" the interface of a Windows application and generate the Windows GUI code in C++. CASE:W generates fully documented, expert level C++ code like you would write yourself. Highly recommended for developers new to Windows programming.
List: \$995 Ours: \$839
FAXcetera #: 2107-0005 Return: N

CASE:W Corporate Edition for OWL 4.0 CASEWORKS

CASE:W Corporate Edition for OWL cuts the time it takes to learn and develop Windows applications using the Borland's ObjectWindows (OWL) C++ library. CASE:W CE for OWL includes a WYSIWYG Designer that allows the programmer to "Draw" the interface of a Windows application and generate the Windows GUI code in Borland C++. CASE:W generates fully documented, expert level C++ code. This tool is highly recommended for developers new to Windows programming.
List: \$995 Ours: \$839
FAXcetera #: 2107-0005 Return: N

CASE:W Knowledgebase for C 4.0 CASEWORKS

Current users of CASE:W Corporate Edition for OWL or MFC can expand their CASE:W product to support Windows programming in C and the Microsoft Windows C API by purchasing this add-on knowledgebase. The CASE:W C Knowledgebase enables CASE:W to generate expert level C code using the traditional C API, and is compatible with CASE:W CE 4.0 or later.
List: \$395 Ours: \$339
FAXcetera #: 2107-0006 Return: N

CASE:W Knowledgebase for MFC 4.0 CASEWORKS

Current users of CASE:W Corporate Edition for C or Object Windows Library can expand their CASE:W product to support object programming in C++ and the Microsoft Foundation Class Library by purchasing this add-on knowledgebase. The CASE:W MFC Knowledgebase enables CASE:W to generate expert level C++ code using the MFC class library, and is compatible with CASE:W CE 4.0 or later.
List: \$395 Ours: \$339
FAXcetera #: 2107-0006 Return: N

CASE:W Knowledgebase for OWL 4.0 CASEWORKS

Current users of CASE:W Corporate Edition for C or MFC can expand their CASE:W product to support object programming in C++ and the Borland Object Windows Library by purchasing this add-on knowledgebase. The CASE:W OWL Knowledgebase enables CASE:W to generate expert level C++ code using the OWL class library, and is compatible with CASE:W CE 4.0 or later.
List: \$395 Ours: \$339
FAXcetera #: 2107-0008 Return: N

DBAPrep N Systems

DBAPrep includes open preprocessor, precompiler, DBA Tool. Supports ANSI/ISO Embedded SQL for C/C++ for multiple databases. Generates C API source for QELIB, Oracle, SYBASE/SQL Server, SQLBase, XDB, IBM ES, more.
List: \$395 Ours: \$335
FAXcetera #: 1002-0901 Return:

DBA Tool N Systems

DBA Tool generates integrity constraint RULES, DEFAULTS, INDEXES, TRIGGERS, Stored Procedures, specific DLL from ANSI DDL=, and much more. Available for DOS/WIN/OS/2, UNIX, VMS, Mac.
List: \$99 Ours: \$90
FAXcetera #: 1915-0001 Return: F

DialogCoder 3.0

The Software Organization, Inc.

Tool for prototyping dialog boxes, the primary user interface components of any application. Provides a complete development environment with a built-in dialog editor, custom controls, a sophisticated code generator and a DLL builder. Provides edit field validation, custom code support, commented source code, and a built-in test environment. Supports conditional control states, automatic code regeneration, owner-drawn controls, color, fonts and much more.
List: \$499 Ours: \$435
FAXcetera #: 2849-0001 Return: F

OWL C++ Switch-It™ Code Generation Module

Blue Sky Software

NEW PRODUCT! OWL C++ Switch-It™ Code Generation Module allows Windows MAKER Professional to generate optimized high quality C++ source code for OWL (Borland Object Windows Library). WindowsMAKER Professional 4.0 allows for Switch-It™ Code Generation Modules. Each Switch-It™ Code Generation Module contains a knowledgebase for generating code for a specific platform using TrueCode technology. TrueCode technology guarantees that the users own code is never modified by the code generator. Supports Borland C++ 2.0/3.0 & higher. Applications may be migrated across platforms and languages.
List: \$495 Ours: \$445
FAXcetera #: 2107-0007 Return: F

MFC C++ Switch-It™ Code Generation Module

Blue Sky Software

MFC C++ Switch-It™ Code Generation Module allows WindowsMAKER Professional to generate optimized high quality C++ source code for the MFC C++ class libraries (Microsoft Foundation Classes). WindowsMAKER Professional version 4.0 allows for Switch-It™ Code Generation Modules. Each Switch-It™ Code Generation Module contains a knowledgebase for generating code for a specific platform using TrueCode technology. TrueCode technology guarantees that the users own code is never modified by the code generator. Supports Microsoft C/C++ & higher. Applications may be migrated across platforms and languages.
List: \$495 Ours: \$445
FAXcetera #: 2602-0008 Return: F

ProtoGen 3.0

ProtoView Development Co.

NEW VERSION! The industry standard for code generation and prototyping Windows applications. Develop the user interface of

your application using Visual prototyping methods. ProtoGen generates expert level, commented code for ANSI C, Microsoft MFC C++, Borland Owl C++, Turbo Pascal, and Microsoft NT Win32. All generators included! User Code preserved from one generation to the next. It's easy and fast!

List: \$199 Ours: \$99
FAXcetera #: 2553-0002 Return: F

ToolBook 1.5 (for Windows 3.0) Asymetrix Corporation

Build custom applications for MS Windows™ 3.x more quickly and easily than with conventional programming languages. Build graphical applications such as: computer-based training, flat-file databases, database front-ends, prototypes, simulations, and interactive presentations. Includes OpenScript®, a complete, extensible object-oriented language with custom functions, DDE and DLL support. New features improve performance with rich, color graphics; optimal page display speed; large script handling; context-sensitive help; network awareness for file protection; pushbuttons and listbox fields; dialog box utility; and Windows message translation.
List: \$395 Ours: \$345
FAXcetera #: 2776-0001 Return: L

WindowsGENERATOR 3.0 Custom-Tek, Inc.

An automatic C code generator for developing user interfaces for Windows 3.x applications. It uses a high level language to specify the various elements that make up Windows environment such as application window, child windows, dialog boxes, message boxes, icons, etc. The C code generated contains "hooks" which are clearly indicated by comments,

where users can insert their codes. Supports all memory models.
List: \$199 Ours: \$159
FAXcetera #: 1000-6201 Return: L

WindowsMAKER™ 3.02

Blue Sky Software Corporation

Designed for the casual user who does not need the advanced features of WindowsMAKER Professional, but wants the same easy-to-use interface to create Windows applications in C. Generates all source and production files. No royalties. The code is commented, fully accessible and easy to maintain. Custom code is preserved during code regeneration.
List: \$795 Ours: \$716
FAXcetera #: 2602-0002 Return: F

WindowsMAKER™ Professional 4.0

Blue Sky Software™

Considered the Industry Standard Visual Prototyper and C/C++ Code Generation Tool for Developing Windows applications. New architecture uses Switch-It™ Code Generation Modules for generating ANSI C, MFC C++, OWL C++ code, among others. Design applications by simply pointing and clicking. Includes Toolbar support. Embedded dialog box editor lets you test the look & feel and make changes on the fly. TrueCode technology ensures that user code is preserved during code regeneration. Generates the Windows .EXE w/exact, expert level, fully commented C or C++ source code. CUA & SAA compliant. No royalties. "A particularly noteworthy product."—Bill Gates, CEO, Microsoft.
List: \$795 Ours: \$795
FAXcetera #: 2602-0003 Return: F



DBAPrep

- Includes Open Preprocessor, Precompiler and DBA Tool for ANSI/ISO Embedded SQL with C and C++ for multiple databases.
- DBAPrep generates optimized, commented database specific C API source from Embedded SQL applications with full support for QELIB, SYBASE/SQL Server, Oracle, SQLBase, XDB, IBM ES.
- Take advantage of standard and extended features of each database using high level Dynamic and Static SQL.
- Standard SQL allows database application independence and shorter development time.
- Generated C code ensures highest performance.
- Excellent documentation and examples on how to take advantage of embedded SQL and each database platform.

DBA Tool

- Processes the CREATE TABLE stmts. to generate database specific SQL scripts to enforce data integrity constraints, WITH DEFAULT and CHECK clauses, Cross Ref. listing, Table Template Structures, C Include and # defines, and much more.
- Generates Refrential Integrity rules including cascade, restrict on update on delete and set null rules.
- Supports unique, unique clustered, normal indexes with primary, foreign, and common keys.
- Generates multiple database specific DDL from ANSI DDL. DBAPrep is available for DOS/Windows/OS/2, UNIX variants, VMS and Macintosh.

Prices starting at \$395

To order call now: 800-445-7899

N Systems, 2300 103rd Ave. NE, Suite A, Bellevue, WA 98004 (206) 450-0815

Windows NT Switch-It™ Code Generation Module Blue Sky Software

The first and only Windows NT 32-bit prototyper and C/C++ application code generator. Windows NT Switch-It™ Code Generation Module allows WindowsMAKER Professional to generate optimized high quality C/C++ source code for Microsoft Windows NT. WindowsMAKER Professional 4.0 allows for Switch-It™ Code Generation Modules. Each Switch-It™ Code Generation Module contains a knowledgebase for generating code for a specific platform using TrueCode technology. TrueCode technology guarantees that the user's own code is never modified by the code generator. Applications may be migrated across platforms and languages.
List: \$495 Ours: \$445
FAXcetera #: 2602-0009 Return: F

Visual SQL

Blue Sky Software

Prototyper and C Source Code generator for creating Windows SQL Database applications. Visual SQL offers the performance of compiled C code and the development speed of 4GL. Quickly generates thousands of lines of complex, easily modifiable C source code for Windows SQL database applications. Build database access right into your application as you visual design it with the powerful screen painter. Award winning preview mode lets you interactively make changes to your prototype before compiling. Visual SQL generates source code for access to the following databases (simultaneously): ORACLE, SQL Server, SQL Base, Integra SQL, dBASE files and databases supported by Microsoft ODBC.
List: \$1500-\$30,000 Ours: CALL
FAXcetera #: 2602-0010 Return: F

WinGEN 1.1

Buzzwords International, Inc.

An object oriented WYSIWYG source code generator/data entry design tool for Windows versions of dBASE, Paradox, C/C++ and Turbo Pascal. WYSIWYG Text, Buttons, and Colors, and other object properties enable creation of advanced interactive Windows database applications. OLE and DDEML links are supported and conversion of ObjectVision .OVD files to source. Available for Windows 3.1, OS/2 2.0 and UNIX X-Windows.
List: \$150 Ours: \$129
FAXcetera #: 1873-0002 Return: N

RoboHELP™ authoring tool 1.0 Blue Sky Software™

Turns Microsoft Word for Windows into a fully functional Hypertext authoring system capable of producing Windows Help files as easily as it does plain text. Guides the user through all the necessary steps—the user just fills in the actual help text when prompted. RoboHelp™ takes care of generating the H, HPJ and the complex, precisely formatted RTF files. User avoids the complexities of setting context strings, keywords, browse sequences, and hypertext links. RoboHelp™ features a customizable visual tool palette (like PageMaker). Programmers and non-programmers can develop a complete Help System under Microsoft Windows 3.x.
List: \$495 Ours: \$449
FAXcetera #: 2602-0005 Return: F

COMMUNICATIONS

C Communication Toolkit/Windows
Magna Carta Software
Full-featured communications library for MS-Windows development. Add

C Communications Toolkit /Windows

Now you can add professional serial communications to any C Windows application! C Communications Toolkit makes it fast and easy. You don't need to spend months writing, testing and debugging low-level device support, file transfer protocols and CRC routines.

Ease of Use and Rapid Application Development is the Name of the Game!

Not until now has serial communications been easy under Windows! C Communications Toolkit/Windows handles all the low-level interaction with the Windows driver — even in 386 Enhanced Mode! Just initialize the port and make I/O calls using functions with intuitive names like `c_putc()`, `c_printf()`, and `c_getc()`.

Flexibility

Build terminal programs, file transfer routines. Control modems and devices like industrial equipment and laboratory apparatus. With C Communications Toolkit/Windows the communications part of the application is taken care of.

File Transfer

To send a file, takes just two function calls. One to queue the file, one to send it. And we offer the widest range of protocols:

Single file: ASCII, XMODEM, XMODEM-CRC, XMODEM-1K.

Multi-file: YMODEM, YMODEM-g (for error-free links), KERMIT (with run-length encoding and 8th-bit prefixing extensions), ZMODEM (for speed and data integrity in harsh environments).

Documentation

Over 200 functions. 600-page manual with 100 pages of Toolkit tutorial (build a powerful terminal program in easy stages). 125 pages of serial communications background and many example programs. Highly compatible with C Communications Toolkit/DOS, and C Communications Toolkit/Extended DOS.

Supports: Borland C++, Microsoft C/Quick C for Windows, Turbo C++ Watcom C. Full source code included — No run-time royalties. 30-day warranty.

CALL (214) 226-6909

FAX: (214) 226-0386

BBS: (214) 226-8088

Magna Carta Software,
Inc.
P.O. Box 475594,
Garland, TX 75047-5594

Only \$299.95

(in TX add 8.25% sales tax)

VISA/MC accepted

communications to any Windows application. Protocols: ASCII, XMODEM/CRC/1k, Kermit, YMODEM, XMODEM-g, ZMODEM. Flow control. Modem support: Hayes compatibles, Telebit, Rascal-Vadic. Three extensive manuals. Full source included. Supports Borland C++, Turbo C++, Watcom c, Microsoft C/Quick C. Full 30-day guarantee.
List: \$300 Ours: \$269
FAXcetera #: 1967-0005 Return: F

LIBRARIES

POET for Windows BKS Software

The only pure Object Oriented Database management system running on DOS, Windows, UNIX and the NeXT machine starting at \$399. Your object databases have a unique identity that supports the full inheritance and encapsulation of C++. Can handle complex real world models. The database model maps directly to its storage. Supports schema evolution so extending and maintaining versions of your schema definitions is easy to do. POET's type manager supports all the C++ types as well as date, time and string, or create your own reusable customized types. The graphical browser allows you to use and navigate, analyze and modify the structure of your database schemas. Sophisticated indexing and optimized querying can quickly find any instance. Specify compiler and operating system.
List: \$499 Ours: \$469
FAXcetera #: 1000-6001 Return: L

SmartHeap™ for Windows

MicroQuill Software Publishing, Inc.

Memory management library and debugging toolkit. Provides ANSI "malloc" for C and "new" for C++. Fixes selector consumption, overhead, granularity, and fragmentation. Supports heaps and free-lists > 64K. Improves performance. Detects double-freeing, memory overwrites, leakage. 160 page manual. Source available. MBG. Formerly OptiMem from Applegate Software.
List: \$395 Ours: \$355
FAXcetera #: 9969-0002 Return: F

Out of Controls 1.0

Select Software

Make your Windows™ applications more POWERFUL and INTUITIVE. Five DLLs including three attractive, CUA-compliant controls (Multi-cell listbox, Line-object editor, and Spinbox) plus a text editor, and model spawning libraries. Controls provide MAXIMUM FUNCTIONALITY and INFORMATION in MINIMUM DISPLAY AREA. Use DLLs in your applications ROYALTY FREE!

List: \$229 Ours: \$195

w/source: List: \$459 Ours: \$195

FAXcetera #: 1004-3101 Return: O

Full 30 day guarantee, but for source code version, source code envelope may not be opened.

Control Palette for Windows

Blaise Computing Inc.

Windows Control Palette is a collection of controls, a custom dialog class and other windows elements for building sophisticated and attractive user interfaces. Packaged as a DLL. Bitmapped push buttons, radio buttons, check boxes, "cannvases", text, toolbars, and status lines are just some of the controls provided. Supports Borland C++, Turbo Pascal for Windows, Visual Basic, the Borland Resource Workshop and requires Windows 3.0 or later.
List: \$169 Ours: \$119
FAXcetera #: 1652-0014 Return: O

Sigma NetBIOS Engine

Sigma Software Research

The Sigma NetBIOS Engine contains C functions to access the popular NetBIOS API standard from Windows 3.X or DOS programs. Access network name, datagram, and session services directly. Fully supports NetBIOS wait, no-wait, and post driven requests. Includes complete NCB and data transfer buffer functions. Shared DLL provides multiple application and session support. Works with NetBIOS compatible networks. Supports MSC 6 & 8 and MASM 5. Requires WINDOWS.TXT for DOS support. All source included.
List: \$155 Ours: \$139
FAXcetera #: 1004-8401 Return: O

zApp for Windows with Source 2.0 Development Corporation

zApp for Windows is a C++ Application Framework that frees you from the complex details of programming in MS Windows and gives you single source code compatibility with OS/2 PM, DOS and UNIX X/MOTIF. zApp's over 130 objects deliver to you Dialogs, Windows, Controls, Menus, Fonts, Graphics, Bitmaps, MDI, Printing, Memory Management, OLE, DDE, Object Persistence, and Forms. Source code included.
List: \$295 Ours: \$266
FAXcetera #: 1000-6401 Return: F

DATABASE

AceFile for Windows 2.0

Ace Software Corporation

New Version! Ace File 2.0 for Windows—Winner of the Windows Magazine 1992 Win Award is an intuitive personal data manager. AceFile provides multiple views—form, report, labels, list, mailmerge, crosstab and 16 different graphs/charts—all with colorful 3D effects and toolbars. Easy-to-build expressions and indexes—report and analyze information from multiple files. Use new or existing data (dBASE, Lotus 1-2-3, EXCEL, or ASCII Files). Network compatible.
List: \$149 Ours: \$149
FAXcetera #: 1004-1301 Return: O

Btrieve 5.10

Novell

A complete, key-indexed record manager designed for high-performance file handling and improved programming productivity. Can be accessed from any standard programming language and allow you to create applications that will run in stand-alone or distributed environments under NetWare, DOS, OS/2, or Windows. Share data with Novell's other data management products.
List: \$595 Ours: \$399
FAXcetera #: 1728-0001 Return: F

dBFAST Windows

Computer Associates

The complete stand-alone dBASE/xBASE development language for MS Windows. You can create fast, powerful, easy-to-use graphical applications. Over 200 extensions to the dBASE III PLUS language and includes an interactive editor, compiler, and linker. dBFast for Windows will challenge your creativity and imagination! Design multiple windows, pull-down menus, check boxes, list boxes, radio buttons, bit-map pictures, and more!
List: \$550 Ours: \$395
FAXcetera #: 1004-0003 Return: O

C/C++ Windows 3.X spreadsheet-like ObjectTable

Table				
	MONEY	PER CENT		
12	\$1,242.00	12.00%		
13				
Table				
	DATE	TIME		acco
14				
15	1	1/12/92	10:30:00 AM	123
16	2	12/12/90	10:30:00 AM	123
17	3	12/12/90	10:30:00 AM	123
	4	12/12/90	10:30:00 AM	123
	5	12/12/90	10:30:00 AM	123
	6	12/12/90	10:30:00 AM	124

Multi-column table, horizontal and vertical scroll, more than 64 K data, cut and paste to clipboard, data validation, easy port to windows C++ library, supports Borland OWL and Microsoft MFC.

C object code \$79 source code \$199
C++ object code \$99 source code \$259

GUI Computer Inc. 1-800-800-9010
214-250-3472 FAX 214-250-1355 BBS 214-250-2077
P.O. Box 795908 Dallas, Texas 75379

ERwin/SQL 1.5 Logic Works

A powerful Entity-Relationship (ER) logical data modeling tool under Windows 3.0. Supports: entity, attribute, and relationship definition; primary and foreign key identification; referential integrity constraints; business rules; inversion entries; foreign and alternate key definition. Transforms logical model into physical schema and generates SQL DDL scripts for many relational systems, including DB2, Oracle, Ingres, SQL Server, Sybase, and SQL Base. Produces presentation quality graphic diagrams.
List: \$995 Ours: \$895
FAXcetera #: 2666-0001 Return: L

Essential B-Tree 2.0 for Windows South Mountain Software

Provides all the necessary tools needed to build professional Windows database programs. By implementing our functions as a DLL, you can use the B-tree library from any Windows API compatible language, such as C/C++, Visual BASIC and others. B-Tree handles all the complexity of running multiple windows that access your database and need to share the same data.
List: \$299 Ours: \$269
FAXcetera #: 2089-0019 Return: L

First SQL-RDBMS FFE Software

Relational DBMS provides ANSI level 1 and DB2-compatible SQL, complete 4GL with windows facilities, direct access to dBASE files. SQL Assist menu-based query builder; DDL SQL standard language for database description; security features; referential integrity; maybe queries and context sensitive help.
List: \$495 Ours: \$449
FAXcetera #: 3301-0099 Return: F

ORIN for Windows 2.4 Objective Solutions, Inc.

A complete Rapid Application Development (RAD) System for Relational Databases from Oracle, Informix, DEC and Ocelet. ORIN's powerful RAD features include Objective Solutions Graphical Query System for window design and database access, application wide data validation, formatting, triggers and an Object Oriented Procedural Language. Applications developed using ORIN can dramatically reduce development time by up to 400%. ORIN applications operate in a client/server, standalone or combination environments with no unique design requirements for any environment. Applications created with ORIN for Windows are fully transportable to all ORIN supported GUI's (Motif, CharacterBased), RDBMS's, operating systems (UNIX, VMS) and hardware platforms.
List: \$1295 Ours: \$1165
FAXcetera #: 1002-0801 Return: F

Q+E Database Library (QELIB) for Windows Pioneer Software

Now you can use your favorite Windows development tool to write your own multi-database applications. Any tool that can call a DLL (Dynamic Link Library) can use QELIB! QELIB's database API makes it possible to write one application that simultaneously accesses, queries, and edits information stored in any of these database formats: Oracle, DB, dBASE, Ingres, Sybase, SQL Server, NetWare SQL, Paradox, Btrieve, XDB, SQL Base, Excel, ASCII. Distribution agreement may apply. OS/2 version available.
List: \$399 Ours: \$359
FAXcetera #: 2625-0004 Return: F

Q+E Database Editor (Q+E), Server Database Edition for Windows 2.6 Pioneer Software

Over 2 million Windows users rely on Q+E to bring data to their desktops! Q+E can directly access, Query and edit database information stored on PCs, LANs and mainframes in fourteen (14) database formats. Then Q+E can easily integrate that data into any spreadsheet, word processor, desktop publishing or business graphics application for OS/2. Supports dBASE, Oracle, Ingres, Btrieve, OS/2 EE DBM, SQL Server, Netware SQL, SQL Base, DB2, XDB, Sybase, Excel, ASCII text files. OS/2 version available.
List: \$299 Ours: \$269
Five user license List: \$999 Ours: \$899
FAXcetera #: 2625-0006 Return: F

Q+E Database Editor (Q+E), Standard Edition for Windows 2.6 Pioneer Software

Over 2 million Windows and OS/2 users rely on Q+E to bring data to their desktops! Q+E Standard Edition can directly access, query, and edit database information stored on PCs, LANs, and mainframes in every major format. Then Q+E can easily integrate that data into any spreadsheet, word processor, desktop publishing or business graphics application for OS/2. Supports dBASE and compatibles, Paradox, Excel, .XLS files, Btrieve, and ASCII text files. OS/2 version available.
List: \$199 Ours: \$179
Five user license List: \$699 Ours: \$629
FAXcetera #: 2625-0005 Return: F

Quadbase-SQL/Win 2.0 Qse Systems, Inc.

A full featured RDBMS in the form of a DLL that supports various Windows development languages such as Visual Basic, C, C++, Toolbox, SQLWindows etc.. It fully supports ANSI level 2 standard plus extensions. The DLL can support multiple instances. It is very fast and compact. It is specially designed to manage large amounts of data efficiently. Advanced features include referential integrity, multi-user concurrency control, crash recovery, transaction processing, scroll cursor and outer join, etc.. dQuery, an award winning query tool/report writer, and VBQUERY, a Windows interactive query tool are included for you to prototype your SQL statements. 'C' programming interface is also provided together with an embedded SQL preprocessor. The underlying file formats are dBASE compatible. Ideal for small to medium sized LAN file server systems or standalone or laptop machines.
List: \$595 Ours: \$535
FAXcetera #: 1864-0003 Return: N

DOCUMENTATION

ABC Flowchart 1.13 Micrografix

ABC Flowchart for Windows® is the fastest, easiest and most powerful PC flowcharting program. Point and click to draw shapes. Type, and text fills shapes and annotates lines. Move shapes, and lines reroute. Simplify procedures by linking shapes to subcharts, even attach notes or code to shapes. Also includes full font support, snap grids, text search, custom shape, import, and reports. Get the best - ABC Flowchart.
List: \$295 Ours: \$147
FAXcetera #: 2062-0007 Return: F
SPECIAL!

WINDOWS DEVELOPERS!

Bored with puny Windows Controls?
Need more than just a pretty face?

Get... **Out of Controls**
software components

Spin Box Control

Tuesday, March 31, 1992

- incorporates full-function edit box
- arrows "spin" selected or default field
- includes date, time and numeric styles
- provides configurable "generic" style
- uses Control Panel date and time formats

Modal Spawning Library

- starts DOS/Windows applications and does not return until spawned application terminates
- simplifies file-based inter-application communication
- supports custom error handling

Multi-Cell List Box

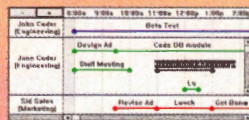
Use	Font	Bold	Italic	Underline
<input checked="" type="checkbox"/> Times Roman	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Helvetica	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Courier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- check box, radio button and editable text cells
- rows may contain multiple cells of any type
- automatically scrolls vertically and horizontally
- allows rows to be reordered by dragging

Text Editor Library

- adds an editor to application in seconds
- provides file, print, edit, clipboard and search options
- supports file sizes up to 32K bytes

Line-Object Editor



- each object may be configured as either fixed or movable against the ruler
- each object may be configured as fixed size, resizable or split-and-rejoinable
- allows multiple category rows for sorting objects
- each row may be configured to allow objects to be dragged out to other rows, in from other rows, both, or neither
- each row may be configured to prevent object overlap
- includes time-of-day ruler
- supports customized ruler formats

Call Today! 1-800-445-7899

ROYALTY FREE, 30 DAY SATISFACTION GUARANTEE
DEMO AVAILABLE on CELECT BBS, COMPUSEVE, and BIX

Voice: 513-573-6800
FAX: 513-573-6888
BBS: 513-573-6890

CELECT SOFTWARE

7500 Innovation Way
Mason, Ohio 45040-9699

A Division of Cincinnati Electronics Corporation

CHARTIST-2 NOVAGRAPH

Comprehensive Windows flowchart and organization chart package. Full color and font support, multiple symbol border and line styles, automatic line routing in multiple styles. Also multi-page support, hypertext references to nested charts and other Windows applications. Includes customizable shapes palette. Shape library is extensible.

List: \$109 Ours: \$99
FAXcetera #: 1005-0201 Return: F

RFFlow, Professional Flowcharting 2.0 RFF Electronics

RFFlow 2.0 is a professional drawing tool for flowcharts and org charts. Requires Microsoft Windows. 100 shapes auto adjust in size. Diagonal lines and curves. Auto line routing and re-routing. Click on a shape and bring up a sub-chart. Move charts to other applications via the Clipboard. Free trial disk.

List: \$129 Ours: \$116
FAXcetera #: 2353-0002 Return: F

**Look Carefully!
Programmer's
Paradise
always has the best
savings!**



MetaDesign Meta Software

MetaDesign is a powerful flowcharting tool that helps users to think, plan and produce diagrams, flowcharts and organizational charts quickly and easily. MetaDesign understands relationships between objects. Its hierarchical structure enables the transfer of detail to sub-pages, logically linking specific graphics throughout a sizable document. Palettes can be imported, exported, and custom designed.

List: \$350 Ours: \$299
FAXcetera #: 2282-0001 Return: F

DEBUGGERS

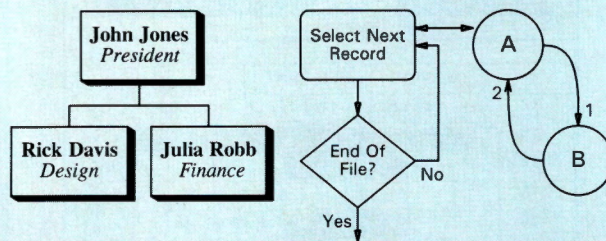
MultiScope Debuggers (for Windows and DOS) MultiScope

The debuggers of choice for Windows 3.0 and DOS. The Run-Time and Post-Mortem debuggers let you trace a program's execution or examine its state after a crash. Browse program source, procedures, and data in 14 different windows; view data graphically. Supports full conditional breakpoints, remote debugging, dual monitor, and 386/486 watchpoints. Uses EMS or 386/486 driver to minimize size. Supports Microsoft C 5.1 and 6.0, Pascal, MASM, FORTRAN and Basic. 100% CodeView compatible. Includes Windows and character-mode interfaces.

List: \$379 Ours: \$289
FAXcetera #: 2575-0001 Return: L

Chartist-2™

Flow Charts And Org Charts For Windows



- Extensible Symbol Library
- Multiple Fonts In Symbols
- Automatic Word Wrap
- Text Justification
- Nested Charts & Hypertext
- Full Color Support
- Print, Export To Documents
- Import Graphics & Text
- Automatic Line Routing

- Multiple Connect Points
- Multiple Line, Border Styles
- Multiple Arrow Styles, Sizes
- Move Data Between Charts
- Chart Templates
- Up To 60" Height & Width
- Multiple Page Support
- Tool Bar, Point & Click I/F
- Customizable Shapes Palette

A Great Value At \$109

Chartist packs in the most useful features for the price, including the best text, line routing and graphics support. It is also fast, with a great user interface.

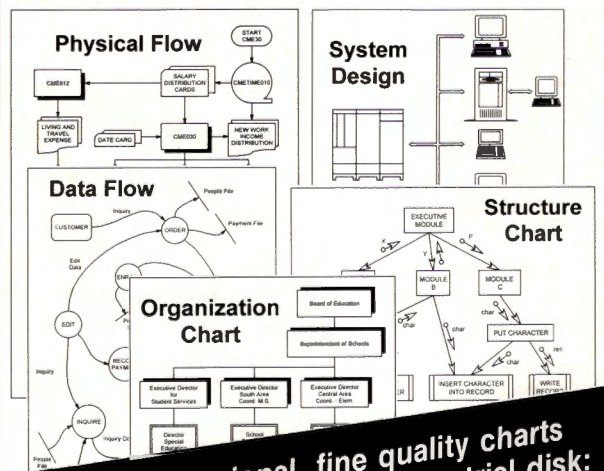
Novagraph

10014 Lawler Rd.
Dallas, TX 75243
214/231-2169

It's Flexible Too: This ad was created *entirely* with Chartist!

RFFLOW Professional Flowcharting Version 2

For Microsoft® Windows™



Create professional, fine quality charts quickly and easily. Call for free trial disk:
(303) 663-5767 FAX (303) 669-4889

\$12900

RFF ELECTRONICS

1053 Banyan Court, Loveland, CO 80538

Why settle for just one?

Drawing Tool



Flow Charter

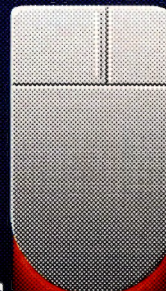


**You can have
the power of both!**

ADS Diagrammer 2.0

Technical Illustration Tool

Diagrammer 2.0 is a new breed of Windows™ Illustrator that combines the power of a drawing tool with the features of a flow charter to create a package that is ideal for technical illustration, documentation and design.



Create complex charts and illustrations effortlessly with Diagrammer's revolutionary mouse-based interface, and use Diagrammer's OLE facilities to integrate with other Windows™ applications.

atlantic
Design Systems

77 Sprucewood Dr., Gilford NH 03246
Phone: (603) 524-2943 Fax: (603) 524-3657

**Call for your free
trial disc today!**

1-800-745-6095

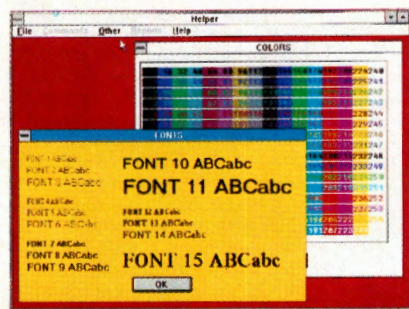
Attention All dBASE Users: Your Windows Have Arrived.



Introducing new dBFast™. The first and only dBASE™ compatible database and

dBASE/X-Base language for Windows. It's the fastest, smartest and easiest way for millions of users and developers to join the Windows revolution.

Graphical, colorful dBFast will bring new life to all of your

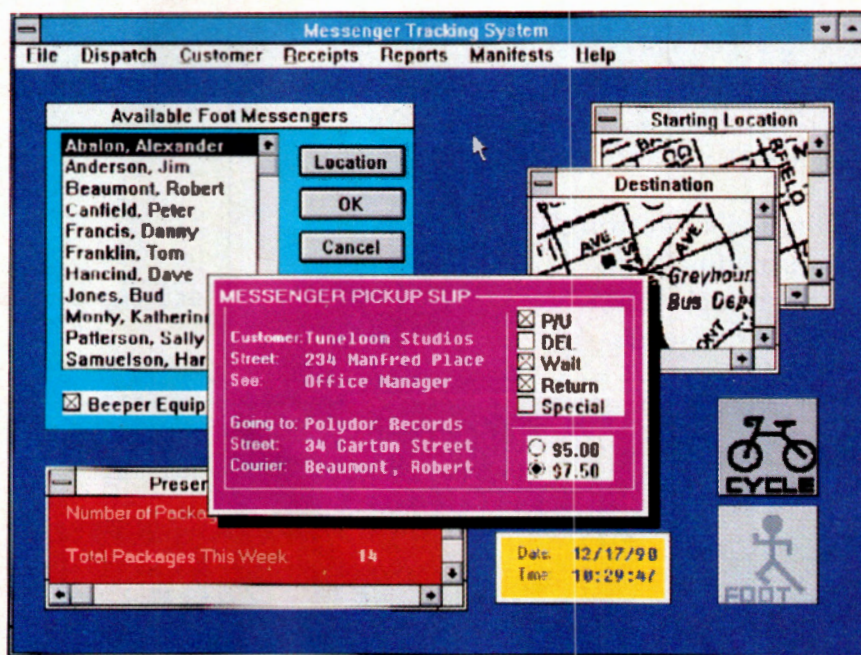


Your applications will really come to life with multiple colors and fonts.

existing dBASE programs.

Liven them up with multiple, movable windows, pull-down menus, check boxes, dialog boxes, radio buttons, push buttons and bitmap pictures.

dBFast also helps



dBFast helps you create powerful, graphical database applications quickly and easily with pull-down menus, check boxes, radio buttons and even bitmap images.

you create new dBASE programs quickly and easily.

Unlike other Windows development systems that force you to learn a new language, dBFast allows dBASE, Fox and Clipper developers to use the language they already know with more than 200 extensions and an interactive editor, compiler and linker.

And full industry standard DDE and DLL protocols allow

your programs to communicate with other Windows applications.



To order call
Programmer's Paradise
800-445-7899

COMPUTER ASSOCIATES
Software superior by design.

dBFast™

What's more important...

powerful editing capabilities or an IDE that offers an integrated solution to your software development needs?

Can't decide between a high-powered editor or a sophisticated IDE with limited editing features? Well, the good news is you can have both!

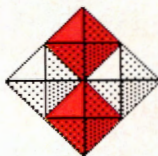
Persona for Windows...

an IDE and Editor for Windows!

Persona for Windows is a powerful new IDE with an editor that will please even the most demanding programmer.

- Project Management • BRIEF and CUA • Function TAGS
- Tiled or MDI Windows • Project-Wide Searches
- Smart Indenting and Templates • Much Much More!

**InnoVision Software's
Persona for Windows.**
One great choice...
One less tradeoff.



MultiScope Debuggers for Windows for MS C/C++ 7.0

MultiScope, Inc.
The MultiScope Debuggers for Windows for MS C/C++ 7.0 provide full support for C++ debugging. Its features include: full support for C++ type display and expression evaluation, class browser window, P-code debugging, the CommandBar for frequently executed debugging commands, character mode/Windows user interfaces with dual monitor option, Crash Analyzer System for after-the-fact debugging, LAN and serial remote debuggers, DLL/Multi-App debugging, 16 different program views, shows complex data structures graphically.

List: \$379 Ours: CALL
FAXcetera #: 2575-0004 Return: L

MultiScope Debuggers for Windows for Borland C++

MultiScope, Inc.
The MultiScope Debuggers for Windows for Borland provide full support for C++ debugging. Its features include: full support for C++ type display and expression evaluation, class browser window, the CommandBar for frequently executed debugging commands, character mode/Windows user interfaces with dual monitor option, Crash Analyzer System for after-the-fact debugging, LAN and serial remote debuggers, DLL/Multi-App debugging, 16 different program views, shows complex data structures graphically.

List: \$379 Ours: CALL
FAXcetera #: 2575-0003 Return: L
SEE SPECIAL BUNDLE OFFER PG 8 & 9!

Periscope/32 for Windows

Periscope Company, Inc.
Offers full-screen symbolic and source-level debugging of Windows virtual device drivers, Windows device drivers, DOS device drivers, programs running in the DOS box, and other system-level software running in a Windows 3.x enhanced mode environment. Operates at the system level and is compatible with applications leveldebuggers such as Code View or Multiscope. Especially helpful in determining the cause of Unrecoverable Application Errors, and offers easy access to any memory location in the system. Runs on a host DOS system connected to a target Windows system with a null-modem cable. This two system method assures that the system being debugged is not altered in any way by the debugger software. Includes a break-out switch.
List: \$395 Ours: 356
FAXcetera #: 1576-0008 Return: O
May charge up to 15% restocking fee on returns. (Must be within 30 days).

EDITORS

ED, The Programmer's Editor, for Windows 1.0

Lifeboat Software
Designed for professionals and new users alike, ED, The Programmer's Editor, for Windows incorporates the best features found in other leading programmer's editors and much more. Key features include built-in code support for C++, dBASE, Clipper, and Pascal; automatic code indenting and completion; hypertext function/procedure lookups; Windows Toolbar; unlimited undo and redo; keyboard macros and remapping; and emulation of popular editors (Brief, Wordstar, Qedit, Norton). Power users will appreciate the fast C extension language, context-sensitive SDK help, LAN file locking, regular expression search, and built-in compiler support with error tracking and background compilation.
List: \$269 Ours: \$199
FAXcetera #: 0233-0011 Return: F

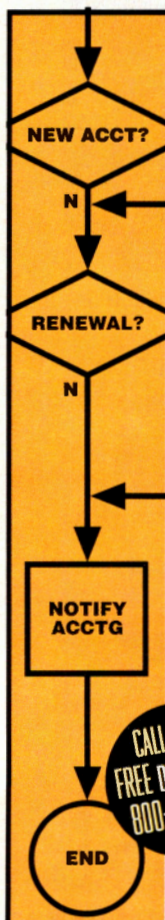
Persona for Windows 1.1

InnoVision Software, Inc.
An Integrated Development Environment that runs under Microsoft Windows 3.0 and above. Persona's fast, full-featured programmer's editor provides both CUA and BRIEF emulations, multiple file buffers, multiple tiled windows, unlimited undo and redo, regular expression search, selectable text fonts, and much more. The Persona IDE provides compile, test and debug facilities, an error tracking window, project configuration, and fast access to SDK hypertext help. Persona is full featured enough to make you leave your favorite DOS editor, but simple enough to install and configure that you will be up and running within 5 minutes.
List: \$120 Ours: \$109
FAXcetera #: 1004-2801 Return: L

FORMS

Design/Windows 3.0/3.1

JetForm Corporation
The heart of the JetForm family is an award-winning, fast, full featured Windows-based forms design product. Offers a complete set of graphics and text handling tools, WYSIWYG, drivers for all lasers and more. Includes Filler/G. Also Merge, Mail & server products.
List: \$495 Ours: \$420
List: \$1995 5-User Ours: \$1695
List: \$6995 20-User Ours: \$6845
FAXcetera #: 0020-5206 Return: O



THE REVOLUTION IN DIAGRAMMING IS HERE!

MetaDesign lets you think through your problems, so you'll create higher quality solutions. Its flexibility puts you in charge of the creative process. You can build customized icons, display relationships between them, and explode them into hierarchies of detail. You'll breeze through learning and using MetaDesign.

Take a look at MetaDesign for solving your small and large-scale diagramming problems. You'll see it's revolutionary.

**CALL FOR A
FREE DEMO DISK.
800-227-4106**



Meta Software Corporation
125 CambridgePark Drive
Cambridge, MA 02140

Available under MS-Windows™
and Macintosh OS.

©1992, Meta Software Corporation. MetaDesign diagrams are transferable between MS-Windows and Macintosh OS.

Flowcharting

Software
Design

Data Flow
Diagrams

Work Flow
Analysis

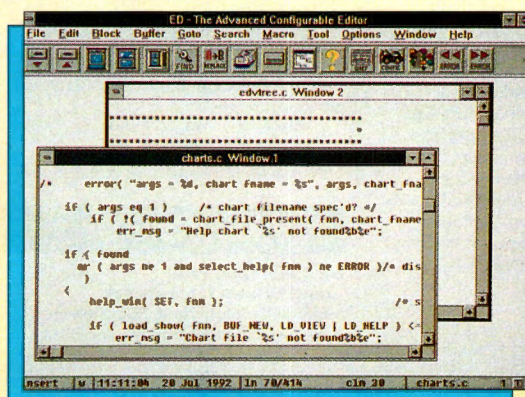
Org Charts

Code
Documentation

Network Design

State Transition
Diagrams

The Wait is Over! At last, a full-featured Windows developer's editor is here.



able at the push of a button. Need Windows SDK help? Just click on the function name and it's right there. Plus, if you've been using another editor, chances are ED speaks your language—BRIEF, Wordstar, Norton, Qedit, and WordPerfect emulations are built right in!

ED—your editor

Most importantly, ED fits itself to you, rather than the other way around. Keyboard macros let you build your own shortcuts, while complete keyboard remapping lets you tie any key to any function. A built-in C extension language enables you to modify and extend ED's capabilities as needed, without using an external compiler or writing DLLs.

Features You Need

ED's programming features are unmatched. Integrated compiles, language-specific editing, hypertext function lookup, regular expression search, and much more make ED a sharp tool for the professional programmer.

Call today and experience for yourself the difference that a programming tool designed for the real world can make!

A DOS version of ED is also available.

Special Introductory Price:

\$199 (Windows version)

\$149 (DOS version)

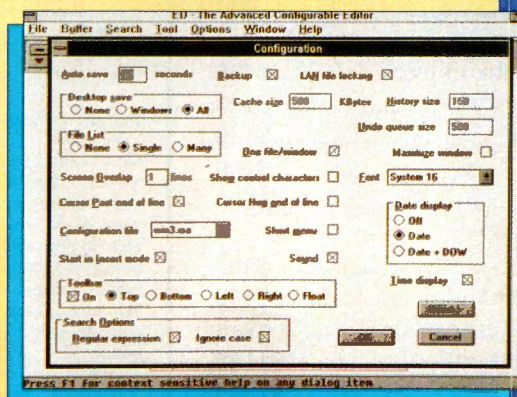
Free demo available—call!

At last—a programmer's editor that's at home under Windows. ED—The Programmer's Editor, is setting the standard for programmer's editors in the 90s with its unique combination of powerful features and true Windows interface.

ED is a true Windows application, designed with a developer's needs in mind. It combines powerful features, extensive configurability, and unmatched ease of use to provide a real world tool for enhancing your coding productivity.

Easy to Use

ED's ease of use is without equal. An icon toolbar puts most functions a mouse click away. Extensive context sensitive help is avail-

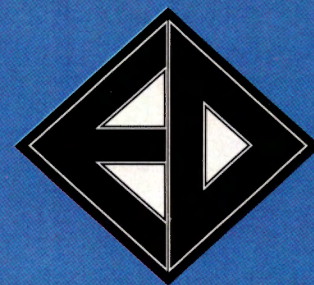


LIFEBOAT[®]

SOFTWARE

1163 Shrewsbury Avenue • Shrewsbury, NJ 07702
Phone: 908-389-0037 • FAX: 908-389-9227

To order call 800-447-1955



**ED—The
Programmer's Editor**

"ED's features are some of the most powerful PC Week Labs has seen in a Windows programming editor."

Larry Seltzer—
PC Week, August 10, 1992

Features Include:

- Support for C/C++
dBASE, Clipper, Pascal
& more!
- Windows Toolbar
- Unlimited Undo
& Redo
- Automatic code indenting & completion
- Compiler support with error tracking
- Integrated SDK help under Windows
- Keyboard macros & remapping
- Fast C extension language
- Regular expression search & replace
- Emulates BRIEF, Norton & more!
- DOS version available

Filler/G for Windows/NewWave JetForm Corporation

Enables user to fill forms created with JetForm Design, gather data and transmit it visually, on-screen data entry facility, full data validation, complete calculations, database query, read & write. Also version for DOS/Character.

List: \$129 Ours: \$115
List: \$495 5-User Ours: \$445
List: \$1495 20-User Ours: \$1345
FAXcetera #: 0020-5207 Return: O

Merge—Windows/DDE JetForm Corporation

Use with any Windows product with DDE capabilities without leaving the application. Merge DDE extracts the appropriate data, combines it with the specific JetForm form, and prints automatically.

List: \$199 Ours: \$169
List: \$795 5-User Ours: \$675
List: \$2395 20-User Ours: \$2035
FAXcetera #: 0020-5208 Return: O

E-Mail/G Windows/NewWave / cc:Mail/MS

JetForm Corporation
Enables users to send and retrieve complex forms, designed with JetForm Design, and the data entry fields, calculations based on the value of other fields, calculations based on the value of other fields, specific routing info, and security.

List: \$495 Ours: \$420
5-User included
List: \$1495 20-User Ours: \$1269
FAXcetera #: 0020-5209 Return: O

GRAPHICS

Essential Graphics Chart for Windows V1.0

South Mountain Software

Essential Graphics Chart for Windows provides a simple to use yet powerful DLL for adding 2D and 3D charts to your Windows applications. By implementing our functions as a DLL, you can use the Chart library from any Windows API compatible language, such as C/C++, Visual BASIC and others.

List: CALL Ours: CALL
FAXcetera #: 2089-0020 Return: F

Graphic-Win

Scientific Endeavors Corporation

Graphic-Win is a library of C-callable routines which can be used to create publication quality scientific and engineering graphics in the Windows operating system. All of the features provided in the DOS version of GraphicC are available. (Please see listing for GraphicC.) In addition, Windows metafile and bitmap screen capture output formats are provided. No knowledge of Windows programming is required. Microsoft and Borland C compilers are supported.

List: \$495 Ours: \$449
FAXcetera #: 1468-0004 Return: L,N

LEADTOOLS DLL for Windows Lead Technologies

A dynamic Link Library for Windows developers which allows the incorporation of image compression, and other image processing into specific applications. Images can be flipped, rotated, reversed, resized, lighten/darken, and

viewed to any place on the screen.

Compress with JPEG and LEAD CMP to over 200:1 ratio. Supports JPEG (JFIF, JTIF, JPC) LEAD CMP, TGA, BMP, TIFF, PCX, GIF, and more. Royalty free. Includes 30-day money back guarantee.

List: \$995 Ours: \$845
No compression List: \$249 Ours: \$213
FAXcetera #: 1005-0103 Return: F

LEADTOOLS 32 DLL for Windows Lead Technologies

An optimize 32-bit Dynamic Link Library or Windows developer. Compress and decompress images at hardware speed but in a software only solution. Images can be flipped, rotated, converted, reversed, and resized as well. Supports SPEG (JTIF, JPIF, and JPC), LEAD CMP, TGP, TIFF, BMP, PCX, GIF, WMF, EPS, and more.

Compress/Decompress a 24-bit 1 meg file in 1 second (486SX-20-MZ)

List: \$995 Ours: \$845
FAXcetera #: 1005-0104 Return: F

PCX Toolkit for Windows 1.0

Genus Microprogramming, Inc

The PCX Toolkit for Windows is a Windows version of the popular PCX Toolkit for DOS. It includes over 30 functions to display, save, scale, and manipulate PCX bitmapped graphics from within any Windows program. Supports Microsoft C, Quick C for Windows, Borland C++, Turbo Pascal for Windows, Visual Basic, and any language supporting DLL's.

List: \$249 Ours: \$199
w/source: List: \$599 Ours: \$479
FAXcetera #: 1991-1007 Return: F

GUI

DbxSHIELD™ 1.2

The Stirling Group

An Inference Engine & library, eliminates the need to write complex dialog boxes—its controls, messages and data. Supports formatted/validated edit fields using picture masks, expanding dialog boxes, hidden and custom controls. Dialog box functionality can be changed by simply changing the rule base. No need to recompile. All dialog box constructs and styles are supported. Dialog box interface is completely portable between Windows and PM.

Windows: List: \$395 Ours: \$359
FAXcetera #: 3106-0001 Return: F

Instant Windows 3.0

WinSoft

Develop data validated user interfaces in 1/4th to 1/10th the time with its screen painter, customizable C code generator and Library. Powerful editing controls include password, required, picture (A9X#IBZ\$), range checks, date, time, money and text files. All standard Windows objects supported. CUA compatible including mouse, menus, buttons, help, hypertext, icons, bitmaps, scrollbars, lists, combo boxes, directories and text files. Features spreadsheet-like tables, portability and connectivity to databases and communications.

List: \$495 Ours: \$419
FAXcetera #: 2867-0002 Return: F

Magic Fields™ 1.0

Blue Sky Software™

Save time by creating Windows 3.x data entry screens with ready to use intelligent input fields. Magic Fields provides the data validation and range checking found only in sophisticated high-end database packages, without the database overhead

to slow your applications down. Just point and click to select one of Magic Fields' large collections of fields that perform data field validation. View, Test, and modify fields without writing code or compiling. Visually define fonts, colors, and 3D NeXT look. Replace existing Windows edit controls without making source code changes. Includes a powerful library with 34 API calls for data manipulation. Can be used with standard Windows dialog editors.

List: \$495 Ours: CALL
FAXcetera #: 2602-0004 Return: F
Special 3 month introductory offer — Call for pricing

Zinc Interface Library 3.0

Zinc Software Incorporated

Lets you develop powerful object-oriented applications for Windows 3.0, DOS Graphics and DOS Text with one set of source code. Zinc Designer (included) uses platform-independent persistent objects to let you interactively design and save your application screens. Powerful event and window managers seamlessly integrate keyboard and mouse input with one line of code.

List: \$400 Ours: \$360
w/source: \$500 Ours: \$450
FAXcetera #: 2807-0001 Return: L

MULTIMEDIA

MediaOrganizer

Lenel Systems International

Multimedia Information Management System to organize, retrieve and display multimedia data. Embed any multimedia element in any OLE-compatible application. Create object databases with sophisticated search capabilities. Includes full media and device control for multimedia peripherals including analog devices and support of major animation, audio, video graphics and documents file and media formats.

List: \$495 Ours: \$419
FAXcetera #: 1005-0301 Return: L

MediaDeveloper

Lenel Systems International, Inc.

Multimedia Application Development Tools to integrate multimedia into applications created with any development environment that supports DLL calls. Includes all multimedia management functions: media, and device control for multimedia peripherals including analog devices; supports major animation, audio, video, graphics, and documents file and media formats; provides comprehensive multimedia database.

List: \$595 Ours: 509
FAXcetera #: 1005-0302 Return: L

PASCAL

Turbo Pascal for Windows

Borland International

New Turbo Pascal for Windows 1.5 brings you all the great features of version 1.0 plus full support for Windows 3.1 as well as 3.0. Color-syntax highlighting that makes it easier to read your code and spot errors, and Resource Workshop - the great new visual resource editor. Turbo Pascal for Windows includes the Object Windows application framework so you can add a sophisticated user interface to your program with just a few lines of code. Also included are Windows CRT to convert DOS applications to Windows, a Windows-hosted development environment, and Turbo Debugger for Windows, and more.

List: \$150 Ours: \$113
FAXcetera #: 1861-0019 Return: F

**The leading line of forms
products offers the most
options to developers
and business!**

JetForm-

Design/Windows 3.0/3.1 incl. Filler/G\$495.

Filler/G for Windows/NewWave\$129.

Filler/C for DOS/Character\$129.

Merge—Windows/DDE\$199.

Merge—DOS\$199.

E-Mail/G Windows

5-user/cc:Mail/MS Mail\$495.

E-Mail/C DOS 5-user/cc:Mail\$495.

5 and 20-user Workstation License(s) avail.

Server for DOS LANS (20-users) \$1195.

Server for OS/2 (20-users) \$1695.



JetForm Corporation
163 Pioneer Drive, P.O. Box 606
Leominster, MA 01453

JetForm is a registered trademark of JetForm Corporation. All other names referenced for its products are trademarks of JetForm Corporation. All other trade names referenced are registered and unregistered trademarks of their respective companies.





WINDOWS AND OS/2: PROTOTYPE TO DELIVERY. NO WAITING.

In Windows and OS/2, you need prototypes. You have to get a sense for what an application is going to look like, and feel like, before you can write it. And you can't afford to throw the prototype away when you're done.

With Smalltalk/V, you don't.

Start with the prototype. There's no development system you can buy that lets you get a working model working faster than Smalltalk/V.

Then, incrementally, grow the prototype into a finished application. Try out new ideas. Get input from your users. Make more changes. Be creative.

Smalltalk/V gives you the freedom to experiment without risk. It's made for trial. And error. You make changes, and test them, one at a time. Safely. You get immediate feedback when you make a change. And you can't make changes that break the system. It's that safe.

And when you're done, whether you're writing applications for Windows or OS/2, you'll have a standalone application that runs on both. Smalltalk/V code is portable between the Windows and the OS/2 versions. And the resulting application carries no runtime charges. All for just \$499.95.

So take a look at Smalltalk/V today. Call your local software dealer, or call Digitalk at (800) 922-8255 for more information. It's time to make that prototyping time productive.

Smalltalk/V

Smalltalk/V is a registered trademark of Digitalk, Inc. Other product names are trademarks or registered trademarks of their respective holders.
Digitalk, Inc., 9841 Airport Blvd., Los Angeles, CA 90045
(800) 922-8255; (213) 645-1082; Fax (213) 645-1306

DIGITAL

LOOK WHO'S TALKING

HEWLETT-PACKARD

HP has developed a network troubleshooting tool called the Network Advisor. The Network Advisor offers a comprehensive set of tools including an expert system, statistics, and protocol decodes to speed problem isolation. The NA user interface is built on a windowing system which allows multiple applications to be executed simultaneously.

NCR

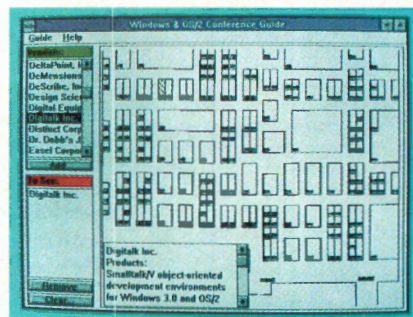
NCR has an integrated test program development environment for digital, analog and mixed mode printed circuit board testing.

MIDLAND BANK

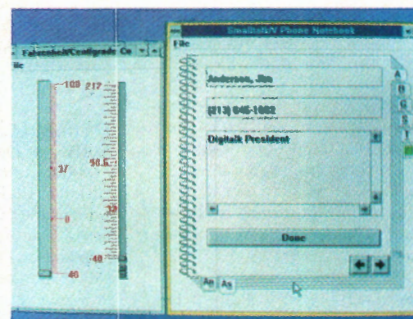
Midland Bank built a Windowed Technical Trading Environment for currency, futures and stock traders using Smalltalk/V.

KEY FEATURES

- World's leading, award-winning object-oriented programming system
- Complete prototype-to-delivery system
- Zero-cost runtime
- Simplified application delivery for creating standalone executable (.EXE) applications
- Code portability between Smalltalk/V Windows and Smalltalk/V PM
- Wrappers for all Windows and OS/2 controls
- Support for new CUA '91 controls for OS/2, including drag and drop, booktab, container, value set, slider and more
- Transparent support for Dynamic Data Exchange (DDE) and Dynamic Link Library (DLL) calls
- Fully integrated programming environment, including interactive debugger, source code browsers (all source code included), world's most extensive Windows and OS/2 class libraries, tutorial (printed and on disk), extensive samples
- Extensive developer support, including technical support, training, electronic developer forums, free user newsletter
- Broad base of third-party support, including add-on Smalltalk/V products, consulting services, books, user groups



This Smalltalk/V Windows application captured the PC Week Shootout award—and it was completed in 6 hours.



Smalltalk/V PM applications are used to develop state-of-the-art CUA-compliant applications—and they're portable to Smalltalk/V Windows.

WINDOWS DEVELOPMENT SOFTWARE

RESOURCE TOOLS

ResourceSHIELD

The Stirling Group

ResourceSHIELD is a visual resource development tool that integrates the entire process of designing, creating, editing, translating, compiling and managing resources for applications running under MS Windows, OS/2 2.0 and Windows NT. Seven powerful resource editors provide the ability to edit sources in binary or text resource files. Allows users to translate resources between any supported platform. Over 100 ready to use, professionally designed resource templates for dialog boxes, menus, icons, and accelerators are included royalty free. List: \$149 Ours: \$129 FAXcetera #: 3106-0007 Return: F

Resource Workshop

Borland International

An integrated development tool that lets you create Windows icons, menus, bitmaps, fonts, and other resources visually without writing code. Creating Windows resources is quick, easy, and fun with Resource Workshop—you just use your mouse to point, click, and "draw" what you want. Features Borland's Custom Controls, which instantly give a sophisticated, professional look to any application. They include three-dimensional radio buttons and check boxes with the graphics and text, and dialog boxes with backgrounds that appear to stand out from the screen. Each resource created within Resource Workshop can be tested immediately without leaving the program. There's no need to exit and compile before testing a new icon, menu, etc. List: \$50 Ours: \$48 FAXcetera #: 1861-0023 Return: F

Whitewater Resource Toolkit 3.0

The Whitewater Group

The Whitewater Resource Toolkit provides C or Actor programmers a consistent way of interactively customizing Microsoft Windows applications. This essential tool lets you draw dialog boxes, color bitmaps, cursors and icons simply by selecting from a palette. The Resource Toolkit can create menus, keyboard accelerators, and string resources as easily as filling in the blanks. Compatible with all Windows resource file formats. List: \$195 Ours: \$169 FAXcetera #: 1640-0002 Return: F

SMALLTALK LANGUAGE

Smalltalk/V Windows 2.0

Digital

The industry's leading object-oriented programming environment. No runtime charges for distributing applications. Complete access to Windows specific features like DDEs and DLLs, facilitating integration with and passing data to/from Windows tools and other applications. Source code compatible with other Smalltalk/V products. Incremental Program development capability and push-button debugger simplify application development. List: \$500 Ours: \$395 FAXcetera #: 1469-0006 Return: L



FAX US TODAY!

TESTING TOOLS

Microsoft Test for Windows

Microsoft Corporation

Automate the testing of your Windows applications with Microsoft Test for Windows. It makes comprehensive testing easier, reduces testing costs, and helps you validate the quality of software as you write it, so that you can deliver better Windows applications in less time. It includes all the tools necessary to create and run automated test scripts. The test scripts can simulate keyboard and mouse input, intercept events such as unrecoverable application errors (UAEs), automatically check for correct results, and automatically log results of tests. List: \$395 Ours: \$279 FAXcetera #: 1269-0035 Return: F

SQA:Manager for Windows

SoftwareQualityAutomation

A workflow automation tool for the QA & testing process. It allows developers and test managers to automate test planning, tracking and management. Features include: standard IEEE, DOD or a Mil-spec test plan templates, comprehensive reports, relational DB, automatic data capture from SQA:Robot, an API for access to data structures for import/export of test case data, interface to third party test tools, E-mail and spreadsheets. Winner of Computer Language Magazine's 1992 Productivity Award. List: \$995 Ours: \$979 FAXcetera #: 1000-1802 Return: O Full 60-day guarantee

SQA:Robot for Windows 1.1

SoftwareQualityAutomation

Windows test execution tool for automated unattended testing of Windows applications. Records keystrokes, mouse and window events and generates Visual Basic program for playback. Test procedures and test results stored in Paradox database. List: \$495 Ours: \$449 FAXcetera #: 1000-1801 Return: O Full 60 day guarantee

ADDITIONAL LANGUAGES/PRODUCTS

DeMystifiers 1.0

MicroQuill Software Publishing, Inc.

Developed by Jeffrey M. Richter, author of Windows 3: A Developer's Guide, it is a toolset for watching Windows' internals including: message processing, global and local memory management; window class and instance management; system-wide environment settings; GDI display and device capabilities; and screen image magnification. More data and superior interface to Spy/Heapwalker/WinSight. List: \$129 Ours: \$109 FAXcetera #: 9969-0001 Return: F

Distinct TCP/IP for Windows - Software Development Kit 2.0A

Distinct Corp.

Distinct TCP/IP Software Development Kit extends the TCP/IP networking capabilities to Microsoft Windows. Includes three Application Programming Interfaces (APIs): Berkeley sockets, Remote Procedure Call (RPC) and Network Windows (NFS client). All are provided as small and fast dynamic link libraries. Coexists on the same board with either Lan Manager (NDIS) or Novell (packets). Includes data declarations for Microsoft C, Visual Basic, Borland C++ and Turbo

Pascal. Supports all Ethernet cards that use NDIS or packet drivers, including 3Com, Western Digital and others.

List: \$495 Ours: \$445 FAXcetera #: 2994-0002 Return: N

InstallSHIELD™ 1.3

The Stirling Group

A full-featured installation program builder especially for Windows/PM apps. Allows you to quickly and easily build Windows 3.0 and PowerPoint like installation programs. A built-in simple install language allows you to create complete installers without any C programming. % Complete and other feedback controls built-in. High-performance data compression. Help and Instruction windows. Automatically builds program groups, items and icons. Access to DLL functions for special needs. Installation logic based on hardware. List: \$395 Ours: \$369 FAXcetera #: 3106-0003 Return: F

KnowledgePro Windows 1.1

Knowledge Garden, Inc.

Use KnowledgePro to build fast, royalty-free applications. Get quick results with interactive design tools. Take control with the rich OOP language. Create smart, easy-to-use solutions with hypertext, hypermedia and built-in expert systems. Link C or C++ code with KLLs and use DDE to integrate Windows programs. List: \$549 Ours: \$379 FAXcetera #: 1474-0001 Return: F

LogSHIELD™ 1.1

The Stirling Group

A powerful, flexible session recording and playback library & API that can be linked to your application. Uses a highly efficient technique for recording all keystrokes, mouse movements & mouse clicks to individual log files for later playback. Improves upon some of the deficiencies of the Windows Macro Recorder. Also creates text mode log files for editing. Can be used for macro recording, automated regression testing, error recovery & remote diagnostics. Can be linked with all Windows/PM applications to create self-running demos. Requires Windows/PM SDK. List: \$395 Ours: \$369 FAXcetera #: 3106-0004 Return: F

MemSHIELD™ 1.0

The Stirling Group

An efficient memory manager library that eliminates memory management problems inherent in Windows/PM: Overhead, Limited Selectors, Locking & Fragmentation. Applications using MemSHIELD automatically conform to Windows Memory Management Standards and are considered "well-behaved". Allows extensive control over allocation & sub-allocation of heaps. Works with local & global memory. Allocate & free heaps based on program function/mode to substantially increase memory efficiency. Advanced memory management & reporting functions allow you to fine tune memory usage. Debugging mode allows tracking of memory problems. List: \$395 Ours: \$369 FAXcetera #: 3106-0005 Return: F

ObjectVision 2.0

Borland

The easiest way to create Windows applications. You simply draw your interface, add logic, and connect to your

data—all without knowing anything about programming. A powerful tool that combines popular features from spreadsheets, databases, forms products and front-ends into an easy-to-use WYSIWYG application tool for all Windows users and developers. Features include direct access to data (Paradox, dBASE, Btrieve, ASCII), graphical decision tree logic, DLL support, OLE, Borland's "Menus-on-Demand", and customizable menus. It is useful for many applications such as order processing, inventory management, call tracking, equipment diagnosis, etc. List: \$149 Ours: \$105 FAXcetera #: 1861-0018 Return: F

ReportRight

Management Information Sciences

The only Windows 3.0 stand-alone report and graph generator. Using ReportRight, end users of any skill level can quickly generate presentation quality reports and graphs against popular databases and spreadsheets such as Lotus, Symphony, dBASE, WordPerfect, Excel, Word, Paradox, Btrieve and more. List: \$199 Ours: \$179 w/source List: \$499 Ours: \$449 FAXcetera #: 1000-6503 Return: L

TbxSHIELD™ 1.1

The Sterling Group

A library of innovative software objects which allow you to add tool boxes to your applications. Tool boxes let users select a tool, operational mode, or an option from an array of graphical selectors. Create tool boxes of virtually any size, shape or style and advanced tool boxes such as 3D tools. Tool Box selectors can be bitmaps, metafiles, animation, icons, owner drawn & more. Developer defined procedures can be linked to each control. Powerful, flexible library allows complete control and supports all popular styles and options. Lets you add impressive and intuitive controls to your applications easily. List: \$295 Ours: \$269 FAXcetera #: 3106-0006 Return: F

ToolsKan - Field Validation 2.0

Kansmen Corporation

A tool for field format specification by means of COBOL-like Picture (PIC) statements. Examples of PIC: "(999) 999-999", and "XXXXXX". It also validates date/time/number fields. With source. (See ToolsKan set for details) List: \$149 Ours: \$127 FAXcetera #: 7119-0001 Return: F

ToolsKan - Ribbon/Icon Bar 2.0

Kansmen Corporation

3D look and feel with color customization. Integrates combobox, static text with application specified font, and buttons with toggle, radio, or push styles, using bitmap or text label. With source. (See ToolsKan Set for details). List: \$149 Ours: \$127 FAXcetera #: 7119-0002 Return: F

ToolsKan - Toolbox 2.0

Kansmen Corporation

It creates buttons from bitmaps or text. It offers a 3D look and feel with color customization, and buttons can be grouped as Multiple selection like toggle buttons. Single selection like radio buttons, and No-state action element like push buttons. Supports scrolling for large number of buttons. With source. (See ToolsKan Set for details). List: \$149 Ours: \$127 FAXcetera #: 7119-0003 Return: F



YOU NEED MORE THAN CAFFEINE AND COOKIES TO TEST GUI, CLIENT-SERVER APPS.

For testing today's complex client-server, GUI applications, you need more than caffeine, cookies and a single test tool. You need a suite of automated tools that deliver higher quality programs, in less time, by supporting your overall engineering team.

Introducing the industry's first Windows Testing Workbench—from Software Quality Automation (SQA). Together, these tools provide complete test development, execution, management and analysis capabilities. And they do it while providing a common test repository, a common user interface, and the ability to develop, execute and analyze tests in a networked environment.

To accelerate development and execution, SQA:ROBOT records test cases and procedures and automatically plays

them back in high level Visual Basic scripts, requiring no further programming. Put it to work overnight and you'll find completed test reports in the morning. SQA:MANAGER then automates the analysis of those reports while providing valuable project status and quality answers to engineering or corporate management.

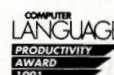
Test Design	Test Execution	Test Management	Quality Analysis
API			
Test Repository			

There is no better way to automate more of the industry accepted testing process than with the Windows Testing Workbench from SQA.

"I think ROBOT is great. Using MANAGER was a breeze. These total package systems are what really makes testing efficient and organized."

Thomas Murphy
Computer Language

Find out why the fastest way to speed your Windows development is to call SQA.
1-800-228-9922.



SOFTWAREQUALITYAUTOMATION

1 PARKER STREET, LAWRENCE, MA 01843 (800) 228-9922 (508) 689-0182 FAX(508) 689-4195

WINDOWS DEVELOPMENT SOFTWARE

ToolsKan - Status Bar 2.0

Kansmen Corporation

Stretchable width fields with auto scrolled text will resize to fit. Colored progress meter showing (%) of completion. Auto text scrolling for animation. Serves as a database front-end. Date and/or time in Windows' configured internationalized format. Keyboard states in NumLock, CapsLock, and ScrollLock. With source. (See ToolsKan Set for details.)

List: \$149 Ours: \$127
FAXcetera #: 7119-0004 Return: F

ToolsKan - Table 2.0

Kansmen Corporation

Multiple row/column selections and column/row split windows. Each column can be configured as a bitmap, radio buttons, check box, combobox and set editable or display only. It can dynamically show or hide a specific columns, and change the column width. Color customization. Serves as a database front-end. It maintains a cache of the current range of data and will ask the application to supply new data. With source. (See ToolsKan Set for details.)

List: \$599 Ours: \$539
FAXcetera #: 7119-0005 Return: F

ToolsKan - 3D Chart 2.0

Kansmen Corporation

Generates 2D and 3D charts such as pie, bar, area, and line. More than 30 chart, axis and labelling styles to choose from. You can see different views of the chart by rotating about the x- or y-axis or by selecting various projection styles. Automatic y-axis rotation adds an animated touch! Can serve as a database front-end; will ask application for new

data only when needed. Supports printing, clipboard, and scrolling for long series of data.

List: \$499 Ours: \$449
FAXcetera #: 7119-0006 Return: F

ToolsKan - Bundle 1 2.0

Kansmen Corporation

A development tool kit for MS Windows. ToolsKan Bundle #1 includes five modules: Table, Status Bar, Toolbox, Ribbon/Icon Bar and Field Validation, which are custom controls designed to be used as regular Windows. All modules are written in Microsoft C 6.0 and compatible with C 7.0. It also is compatible with Borland C/C++, Turbo Pascal for Windows and Quick C. Source codes and DLLs are included. Royalty-free. (See individual listings for product description on each tool.)

List: \$899 Ours: \$809
FAXcetera #: 7119-0008 Return: F

ToolsKan - Bundle 2 2.0

Kansmen Corporation

A development tool kit for MS Windows. ToolsKan Bundle #2 includes five modules: 3D Chart, Status Bar, Toolbox, Ribbon/Icon Bar and Field Validation, which are custom controls designed to be used as regular Windows. All modules are written in Microsoft C 6.0 and compatible with C 7.0. It also is compatible with Borland C/C++, Turbo Pascal for Windows and Quick C. Source codes and DLLs are included. Royalty-free. (See individual listings for product description on each tool.)

List: \$799 Ours: \$719
FAXcetera #: 7119-0009 Return: F

ToolsKan - Complete Set 2 2.0

Kansmen Corporation

A development tool kit for MS Windows. Complete ToolsKan Set includes all six modules: 3D Chart, Table, Status Bar, Toolbox, Ribbon/Icon Bar and Field Validation. Compatible with Microsoft C/ C++, Borland C/C++, Turbo Pascal for Windows and Quick C. Source codes and DLLs are included. Royalty-free. (See individual listings for product description on each tool.)

List: \$1299 Ours: \$1169
FAXcetera #: 7119-0010 Return: F

The Windows Help Magician

Software Interphase, Inc.

An integrated help development system that simplifies the creation of help files for Microsoft Windows. The Help Magician allows developers to create, edit, import, and test the functionality of help files within the help text. Include bitmaps and all forms of hot spots. Allows the importing of ASCII text and RTF files written with Microsoft Word for Windows. Supports all Windows languages and is a must for anyone writing Windows help files.

List: \$199 Ours: \$169
FAXcetera #: 1767-0008 Return: F

Windows Workstation 4.0

Automated Design Systems Inc.

Group of tools and utilities designed to help manage windows on the network. Provides icon based menus centrally managed, print management, scripting language, network & standalone security and metering of windows applications (for Network only).

List: \$695 Ours: \$629
FAXcetera #: 2950-0001 Return: L

REXX Language

REXX/Windows kilowatt software

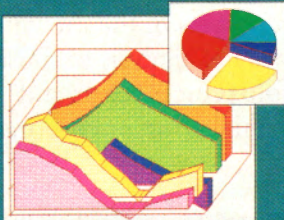
All REXX language statement and built-in functions. Windows GUI interfaces can be dynamically created by the user, or by using 100+ additional functions in REXX programs. User extensions can be added using SAA exit interfaces. Excellent for automating inter-application communications using DDE, OLE, or simpler techniques. Includes 400+ page book, online help, online examples, and Portable/REXX for MS-DOS.

REXX/Windows List: \$149 Ours: \$127
w/opt. P/H book List: \$179 Ours: \$152
FAXcetera #: 1001-4402 Return: F



**CORPORATE
CUSTOMERS
CALL CORSOFT
800-441-1511**

Windows Tools



■ 3D Chart

- Over 30 Chart styles
- Rotation & Scrolling
- Supports printing & clipboard

■ Table

- Column & row split windows
- Multiple row/ column selections
- Check boxes/ radio buttons/ bitmaps/ editable & combobox column
- Input Validation
- Color customization

■ Status Bar

- Auto scrolled text
- Stretchable field width
- Colored progress bar
- Show date/time & key states

■ Toolbox

- Creates buttons from bitmaps or text
- Supports scrolling
- 3D buttons w/color customization
- Single/ multiple/ no-state button groups

■ Ribbon / Icon Bar

- 3D items w/color customization
- Supports combobox, text & buttons

■ Field Validation

- Validates date/time/number fieldsand "PIC" statements

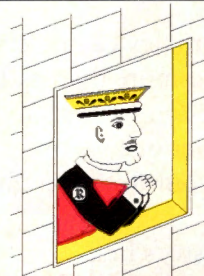
	First Name	Last Name	St	Top Sales	Sales > \$50
2	Abby	Coleman	California		<input type="checkbox"/>
3	Rob	Fessler	Massac		<input checked="" type="checkbox"/>
4	Carl	Perez	Texas		<input checked="" type="checkbox"/>
5					
16					
17	Ivan	Speerman	Michigan		<input checked="" type="checkbox"/>
18	John	White	Arizona		<input checked="" type="checkbox"/>
19	Pete	Hamilton	Colorado		<input checked="" type="checkbox"/>
20	Mart	Smyer	Wiscons		<input checked="" type="checkbox"/>
21	James	Bradley	Illinois		<input checked="" type="checkbox"/>
22	Lisa	Hayes	Marylan		<input checked="" type="checkbox"/>
23	Maria	Smith	Kansas		<input checked="" type="checkbox"/>
24	Dan	Jackson	Florida		<input checked="" type="checkbox"/>
25	Alan	Blake	Indiana		<input checked="" type="checkbox"/>
26	Sina	Wilson	Utah		<input checked="" type="checkbox"/>

All With Source. Royalties Free.
30-Day Money Back Guarantee.

Consulting & Contract Programming Available

Kansmen Corporation

Tel: (408) 988-0634 Fax: (408) 988-0639



tm

REXX / Windows

Last year, Kilowatt Software gave you REXX for MS-DOS. This year, the king does Windows. After one try, you'll agree:

Think REXX
anything else is just basic.

Visual programming	All REXX language features
Rapid GUI development	Batch command scripts
File processing	Parsing
DDE/OLE connectivity	Extendible via DLL exits

REXX/Windows™ \$129.00 [CA +8% tax] S&H \$7.50 Visa/MC
Specify 3.5HD or 5.25HD diskette format

kilowatt software

1945 Washington St, #410, SF, CA 94109
US/Canada Phone/FAX (800) 848-9474
International Phone/FAX (415) 346-7353

DESQview 386 2.4

Quarterdeck Office Systems

DESQview lets you run multiple programs at the same time. You can now print a spreadsheet, touch up a graphic in a paint program, and sort a customer list—all at the same time. DESQview works perfectly with Microsoft Windows, so you can run Windows at the same time as other non-windows programs. Also includes QEMM-386, the award-winning memory manager, so you can make the best possible use of memory for powerful multi-tasking. New version 2.4 includes enhanced support for network-specific applications. Includes Manifest, the award-winning diagnostic tool, free with purchase.

List: \$220 Ours: \$149
FAXcetera #: 1970-0001 Return: L

DESQview Version 2.4

Quarterdeck Office Systems

DESQview lets you run multiple programs at the same time. You can now print a spreadsheet, touch up a graphic program, and sort a customer list—all at the same time. DESQview works perfectly with Microsoft Windows, so you can run Windows at the same time as other non-windows programs. New version 2.4 includes enhanced support for network-specific applications.

List: \$130 Ours: \$115
FAXcetera #: 1970-0005 Return: L

DR DOS 6.0

Digital Research

A fully compatible operating system for all Intel-type PCs. DOS 6 is targeted at the full market of PCs: from 8088-type IBM XT's to high performance 80486 PCs. Helps DOS applications run faster, allows hard disks to store more data, provides a security system for data integrity, and is easy to use. The ease of use stems from two features: on-line help and the innovative DOSBOOK command, a hypertext, on-line manual. Additionally, data can be shared using FileLINK with other PCs over a serial cable. Fully Windows, DOS, and network compatible. Contains UNDELETE, disk caching, file compression, memory management, task switching and UNINSTALL. 80286/386/486 PC users, with more than 1MB of RAM, can access up to 628K of memory. This memory is freed by MemoryMax, DR DOS 6.0's memory management scheme. Files, buffer, network drivers, etc. are loaded out of the way into Upper Memory and High memory, freeing up to 628K. The only DOS to offer upper memory support on non-386 PCs.

List: \$100 Ours: \$59
FAXcetera #: 1024-0005 Return: L

IBM C Set/2

IBM Corporation

Includes a 32-bit SAA C Compiler with run-time libraries and a fully integrated, source level Presentation Manager Debugger.

List: \$696 Ours: CALL
FAXcetera #: 3142-0005 Return: L

IBM Developer's Toolkit for OS/2 2.0

IBM Corporation

Provides a comprehensive set of language-independent tools and code samples that are fundamental to building advanced OS/2 2.0 programs. Includes System Object Module (SOM) compiler, resource compiler with dialog box, font, and editors, kernel debug support, and more.

List: \$119 Ours: CALL
FAXcetera #: 3142-0014 Return: L

IBM Extended Services

for OS/2 1.3

IBM Corporation

Offers new communications and database function and usability improvements over those offered in the IBM Extended Edition List: \$595 Ours: CALL
FAXcetera #: 3142-0011 Return: L

IBM Operating System/2 2.0

IBM Corporation

IBM OS/2 2.0 gives you the ability to run DOS, Windows, 16-bit and 32-bit OS/2 applications concurrently from a single platform. Includes a simplified yet powerful user interface with a graphical OS/2 2.0 installation procedure, an object-oriented OS/2 Workplace shell, online contextual help, online reference and tutorial.

Upgrade List: \$195 Ours: \$149
List: \$149 Ours: \$135
FAXcetera #: 3142-0009 Return: L

IBM OS/2 2.0 Technical Library

IBM Corporation

Includes programming guides and other printed references that supplement the Developer's Kit and explains how to utilize the new features of OS/2 2.0. List: \$299 Ours: CALL
FAXcetera #: 3142-0012 Return: L

IBM WorkFrame/2

IBM Corporation

Features a project organizer that allows you to easily set up, combine and associate application development projects.

List: \$90 Ours: CALL
FAXcetera #: 3142-0013 Return: L

Microsoft Windows 3.1

Microsoft Corporation

Easy-to-learn graphical environment breaks the 640K memory barrier, allowing Windows applications to access all the memory in your PC—up to 16 MB. Using icons, pulldown menus, and dialog boxes, you can

easily cut and paste between applications featuring DDE support. Automatically determines hardware configuration to optimize performance of system. Desktop applications included in package.

List: \$149 Ours: \$99
FAXcetera #: 1269-0005 Return: L

MS-DOS 5 Installation & Optimization (video)

Microsoft University

This video course consolidates all the information support professionals need to successfully install, optimize, customize, installation for multiple on a network, customize the MS-DOS 5 shell and optimize systems for best use of available memory and machine resources. Technical concepts and skills are explained by a mix of lecture, demonstration, and 3D animation. Periodic Try it Out breaks enable students to apply what they've learned immediately.

List: \$149 Ours: CALL
FAXcetera #: 1002-5401 Return: L

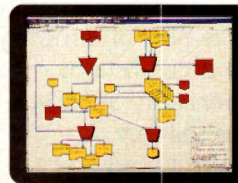
Flowcharting as Simple as ABC.

Special Offer
50% off

ABC Flowcharter for Microsoft Windows is the fastest, easiest, and most powerful PC flowcharting program available – which is probably why it's the #1 selling Windows flowcharting program.

Automatic shape sizing, line routing, and shape alignment let you create, edit, and print high-quality charts faster and easier than ever before. Simply move a shape, and **ABC Flowcharter** automatically reroutes the connections, as well as attached text. Choose from a full palette of colors, patterns, border styles and fonts. You can even link shapes to sub-charts for greater detail, attach notes for additional information, and much more. And, as with all Roykore products, our free support Hotline is available if you ever need assistance.

To order, contact your local dealer. Or, for more information, free chart samples, or a demonstration disk, call us at **1-800-227-0847**. No matter how basic or complex your flowcharting needs may be, **ABC Flowcharter** will make your job simpler and more efficient. Retail price \$295.00.



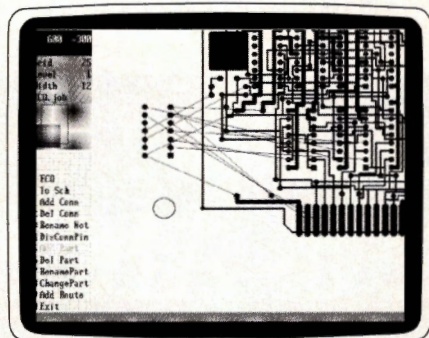
M I C R O G R A F X®

Call Programmer's Paradise

1 - 8 0 0 - 4 4 5 - 7 8 9 9

ABC Flowcharter is a trademark of Roykore, Inc. Microsoft and Windows are trademarks of Microsoft Corporation.

3 REASONS WHY SCHEMA PCB IS THE LAYOUT PROGRAM FOR YOU:



1

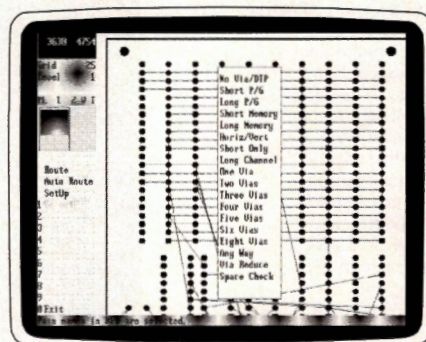
TIME-SAVING FORWARD/BACK ANNOTATION

SCHEMA PCB saves you time, every time you make a change. By automatically updating your layout changes forwards and/or backwards, the system seamlessly implements your revisions without involving you in unnecessary details.

2

MONEY-SAVING AUTO-ROUTERS

The time it takes to analyze, select and change routes can add up to big money fast. That's why SCHEMA PCB offers multiple routing options, which let you pick the most efficient router for your specific needs.



3

DESIGN CONTROL TO 1/1000"

Thanks to SCHEMA PCB's highly refined control dimensions, you don't have to add unnecessary layers to your PCB design. By offering the closest control increment in its price class, SCHEMA PCB lets you design more into every board.

If you want to save time and money designing high quality printed circuit boards – up to 32" x 32", in as many as 30 layers – try SCHEMA PCB FREE! Just call us toll-free or write to us directly. We'll send you a

SCHEMA PCB evaluation system at no charge, no strings attached.

See for yourself why SCHEMA PCB is the layout program for you. Contact OMATION today!



DOS

CIRCUIT DESIGN

SCHEMA III OMATION INCORPORATED

Create schematics of any size design. Hierarchical structure with unlimited number of sheets per hierarchy simplifies designs. Includes over 8,500 digital, analog, microprocessor, PAL & symbol parts plus EZ parts maker. Edit, move, copy, & repeat parts, labels, or regions. Rotate parts and auto-increment gates. Extensive design rule checks. Over 25 netlists plus DXF, EDIF, dBASE, Lotus, TIFF, Postscript, & PSpice outputs.
List: \$495 Ours: \$446
FAXcetera #: 1892-0001 Return: L

SCHEMA PCB board layout OMATION INCORPORATED

Manual layout and routing package for printed circuit boards up to 32" x 32" with 30 layers. Create boards with 400+ ICs. Tracks, pads, and grids defined by user in 1 mil increments. Enter design from schematic output or on-the-fly. Over 3,500 parts library plus alternate decals. SMT both sides. Extensive design checks. Component side swap and pin swap save design time.
List: \$975 Ours: \$878
FAXcetera #: 1892-0002 Return: L

SCHEMA PCB-Options Package OMATION INCORPORATED

(Autoplace/Autoroute/Photoplot/NC Drill) Speed your PCB design. Includes Autoplacement for intelligent placement of components based upon designer specifications. Three algorithm Autorouter lets users set strategy; software checks

completed board, and optimizes for minimum length and minimum vias. Users may pre-set components and pre-route critical tracks. Options pack also includes automated output files required by Gerber Photoplotters and Excellon NC drills.

List: \$520 Ours: \$469
FAXcetera #: 1892-0003 Return: L

COMMUNICATIONS

Carbon Copy Plus 6.0 Microcom

Remote control software works over a LAN or over a Modem. When connected, the keyboards and screens of both PC's operate as if they are both attached to the host. Separate host and guest application and a LAN component are included. Features: file transfer, universal graphics translation, security, voice/data switching, screen session capture, chat utility, call table, log file.

List: \$199 Ours: \$118
FAXcetera #: 2532-0001 Return: L

Clipboard Electronic Mail System Front Line Software

Clipboard™ is a self-contained, fully-functional, stand-alone E-mail and bulletin board system. It requires MS/PC-DOS V3.3 or higher and Ansi-Sys (supplied as part of DOS) to operate. Clipboard can run on a stand-alone PC or with a variety of NetBios™ compatible LANs and supports unlimited local or remote users. It is ideally suited for use in technical support, where it can save thousands of dollars in technical support man-power cost.

List: CALL Ours: CALL
FAXcetera #: 1004-7602 Return: F

Crosstalk Mark 4 LAN Pak DCA/Crosstalk

Now, up to four people on a LAN can access Crosstalk Mark 4 at the same time with the new Crosstalk Mark 4 LAN Pak. Using a Novell IPX/SPX-based network, you simply load the software onto your server or copy it onto as many nodes as needed. An automatic counter limits the number of concurrent users to 4. Crosstalk Mark 4 features more emulations, including WYSE, HP, VT, and FTERM., DEC LAT support. Multiple sessions, IND\$FILE file transfer, high speed modem support. Queue Dialing. PC Magazine's "Editors Choice".

List: \$1295 Ours: \$799
FAXcetera #: 2744-0003 Return: L

Norton pcANYWHERE 4.5 Symantec

Norton pcANYWHERE Version 4.5 offers a wealth of enhanced features and capabilities that have redefined what remote computing software should be. Fast, reliable, and flexible, it allows any PC to access and control a DOS or Windows-based PC for remote computing and complete general communications via a serial or modem connection. New features include a Quick Connect menu option, more terminal emulations, and a powerful scripting language. Version 4.5 offers remote control of Windows in all modes, with full mouse support. Norton pcANYWHERE is the only asynchronous communications program you'll ever need.

List: \$179 Ours: \$129
FAXcetera #: 2132-0032 Return: F



Procomm Plus

Datastorm Technologies, Inc. Procomm Plus is the most powerful communications software in the world, combining power, ease of use, and affordability. It delivers fast, efficient file transfers with 100% data integrity. You can run full-screen mainframe applications by using your PC as a remote terminal. Other features include on-line help, session logging, programming hooks, a user-sizeable re-display buffer, customizable display features, and mouse support.

List: \$149 Ours: \$134
FAXcetera #: 1118-0005 Return: L

Soft/3270 PH Technologies

Specifically for PC to IBM mainframe access. Asynch 3270 emulation, mainframe file transfer and remote print software for your PC. No add-on PC boards to buy. Uses protocol conversion hardware at most data centers - 3174 with AEA, 3708, 7171, etc. Uses IND file or optional module for file transfer. File transfer may be used alone with Procomm and others. Easy to install, set up, and use. Keymaps, 5 sessions, scripts configuration files, command files, HLLAPI support, hot keys, etc.

List: \$150 Ours: \$128
FAXcetera #: 1005-1801 Return: L

**ORDERS PLACED
BEFORE 2 PM FOR
PRODUCTS IN STOCK
ARE SHIPPED THE
SAME DAY!**

AT&T TERRANOVA™ COMMUNICATIONS

AT&T TERRANOVA COMMUNICATIONS is a flexible, feature-rich communications system that runs as an application under DOS, Windows, and UNIX. TERRANOVA is a menu-driven network software package that allows PC users to integrate computers, networks, and applications into an easy-to-use solution.

NOT JUST AN ORDINARY COMMUNICATIONS PACKAGE.

TERRANOVA allows you to become an active participant on any network.

Powerful features include:

- Central Software Administration
- Remote Print Spooling
- Remote Commands
- Multiple Concurrent Sessions
- Dynamic Data Exchange (DDE)
- Terminal Emulators
- Script Processor & Learn Feature
- Device Support & File Transfer.



TERRANOVA COMMUNICATIONS

*A New Horizon in
Networking Solutions*

To Order Call PROGRAMMER'S PARADISE at **800-445-7899**

TELECOMMUTERS LAPTOP USERS REMOTE OFFICES

*Dial-up your IBM mainframe
from your remote PC!*

Soft/3270 provides all the functions of a locally attached PC

- **WITHOUT** a 3270 coax card and **NO** expensive mainframe software!

SIMPLE to INSTALL, SET UP and USE. Single keystrokes for setup, dial and file transfer menus.



*“Far better
than FTERM...
easy to use!”*

Features:

- Asynchronously connects to 3174, 3708, 7171 and other 3270 protocol converters
- PC-Mainframe file transfers in binary or text mode
- XMODEM, YMODEM, ZMODEM and KERMIT
- Shared print support
- HLLAPI and more!

The PERFECT PC to IBM mainframe asynch connection!

PH TECHNOLOGIES

1-800-292-2970 • FAX 1-408-293-6442

TERRANOVA for DOS AT&T

A feature-rich communications system that runs as an application under MS-DOS 3.0 or greater. TERRANOVA is a menu-driven network software package that allows PC users to integrate computers, networks, and application software into an easy-to-use solution. Includes the necessary tools to take stand-alone, separate components and create a network solution. Features like our Central Software Administration, Systems Window, Remote Command capabilities allow you to become an active participant on the corporate network.

List: \$200 Ours: \$180
FAXcetera #: 1002-4001 Return: L

TERRANOVA for DOS w/PBX Report Generator AT&T

Provides an easy-to-use, menu-driven interface to your AT&T PBX system. The software reduces the tedious task of capturing and analyzing PBX data to a simple point-and-shoot system. Plus, pop-up menus with 3D color help guide you step-by-step through all the functions of the system. Novices become experts without a big learning curve.

List: \$500 Ours: \$429
FAXcetera #: 1002-4002 Return: L

TERRANOVA Network Version AT&T

Allows you to use your PC as part of a StarLAN network to communicate with other computers that are not part of the same network. The network version includes all the features of the TERRANOVA Release 3.0 for MS-DOS™, plus it has additional capabilities to act as a gateway through your UNIX-based LAN server.

List: \$2500 Ours: CALL
FAXcetera #: 1002-4003 Return: L

CONTRACTS-LEGAL

QuickForm Contracts 2.2 Invisible Hand Software

An expert system for your PC that automates the drafting of nine categories of contracts most often needed by software developers and consultants. Prompts you with multiple choice questions and then automatically assembles a "near custom" agreement weighted to your side. QuickForms literally produces millions of variations of documents each in about 10 minutes. Port any document to your word processor for fine tuning by counsel. Saves time, money and let's you hit the table first with a document weighted in your favor.

List: \$195 Ours: \$175
Prof. Version List: \$395 Ours: \$359
FAXcetera #: 3285-0001 Return: L

GRAPHICS

HALO Desktop Imager Media Cybernetics

An easy-to-use, complete desktop image processing program for those who want to use images in reports, documents and presentations. Advanced printing features allow users to match each image to their printer's maximum capabilities, print test strips for a quick and exact preview of work, and even create quality wall-sized posters. The base product provides input and display, file conversion, image enhancement, and high quality printing features. Users will customize the

program with specific modules for individual needs (e.g., image compression, image database, advanced printing, video capture, special effects, color separations).

List: \$139 Ours: \$89
FAXcetera #: 1045-0012 Return: N

HALO F/X Media Cybernetics

HALO F/X is a DOS gray scale image editing software package. The windowed interface allows access of up to 10 images simultaneously. The product supports all the popular scanners, display devices, and printers. Functions include interactive, real-time editing of images, cut, paste, sharpen, rotate, warp, distort, posterize, and ditto.

List: \$295 Ours: \$209
FAXcetera #: 1045-0013 Return: N

Dr. HALO IV Media Cybernetics, Inc.

This high powered image processing utilities package is cleverly disguised as a low cost paint package. Everything you need to create, capture, manipulate, convert and print images all in one valuable package. Paint with special effects, edit large images, view and convert popular file formats, customize fonts, capture screens, and create slide shows. Super VGA support.

List: \$139 Ours: \$99
FAXcetera #: 1045-0008 Return: N

LEADVIEW LEAD Technologies

Software only version which compress, decompress, view, convert, and resize images. Compress color or gray scale images with SPEG or LEAD to over 200 times smaller than original. File formats includes SPGL6 (FIF, JTIF, JPG), LEAD CMP, TGA, BMP, GIF, PCX, and more. Supports VGA, SVGA, Hi-color, True color and TARGA + boards. Operates as a stand alone menu program, or as a TSR. Also includes command line utilities for batch processing.

List: \$129 Ours: \$115
FAXcetera #: 1005-0105 Return: F

LEADVIEW 32 LEAD Technologies

Accelerated software version of LEADVIEW for 386 or higher. Compress, decompress, view, convert, flip, rotate, and resize images. Compress color and gray scale images to over 200:1 ratio. File format support includes SPEG (JTIF, JFIF, JPG), LEAD CMP, TGA, TIFF, BMP, PCX, GIF, WMF, EPS, bit CCITT, and move. Operates as a standalone program or from command line utilities. Video support includes VGA, SVGA, Hi-color, true color. TARGA1+, and V1 STA boards. Compress/decompress a 1 meg 24 bit TGA file in 1 sec (4865x20).

List: \$495 Ours: \$445
FAXcetera #: 1005-0106 Return: F

Professional Clip Art Gallery SoftAge Publishing

Contains some of the richest detailed clip art available. The packages range from 75 images to over 1000 including everything from Animals, to Business, to Transportation. Compatible with nearly any Word processing or Desktop Publishing application for the IBM or compatible computer. The wide selection of quality clip art and extremely reasonable price makes it the perfect choice.

Master Gallery (1000 Images)
List: \$200 Ours: \$179
Mini Gallery (350 Images)
List: \$100 Ours: \$ 89
Business Gallery (75 Images)
List: \$ 35 Ours: \$ 29
Sports Gallery (75 Images)
List: \$ 35 Ours: \$ 29
Signs & Symbols Gallery
List: \$ 35 Ours: \$ 29
Sampler Gallery (75 Images)
List: \$ 35 Ours: \$ 29
Holiday Gallery (75 Images)
List: \$ 35 Ours: \$ 29
FAXcetera #: 1002-6601 Return: L

SHOWCAT Image Catalog 1.4 Sun Country Software

PHOTOREALISTIC IMAGE VIEWER/CATALOG for multimedia presentations, viewing, audio and image management. Contemporary, graphic mode, control-panel interface, mouse 3D buttons, Visual Navigation. SHOWCAT is a powerful, IMAGE catalog for organization and management of SVGA images to 1024x768x256. View, manage, and prepare scripted Image & Sound Presentations. Supports BMP, CUT, Edsun Laboratories' CEG/DAC, GIF, IMG, IFF, PCX, TGA, TIF and PC Storyboard. SuperVGA and CEG drivers included.

List: \$200 Ours: \$179
FAXcetera #: 2989-0007 Return: N

SHOWCASE Image Database 1.8 Sun Country Software

Contemporary, Control-Panel Interface, 3D buttons, mouse support, visual navigation, virtual imaging and animation display capabilities! A powerful, IMAGE database ready for your images (to 1024x768x256) and Autodesk Animator FLI sequences. Suitable for business or entertainment use. An easy to use solution to the database management of Super VGA quality, photorealistic, scanned or video-captured pictures.

List: \$595 Ours: \$535
FAXcetera #: 2989-0005 Return: N

SUNSCAN Digital Scanware 2.2 Sun Country Software

Menu driven from DOS with keyboard and/or mouse input. Preview mode with auto-rubberbanding lets you snap to desired coordinates for both input and output. All key routines are written in assembly language. Supports 8-24 bit Targa, 8-bit display in Targa, TIF 4.2/5.0, GIF & PCX formats to 1024 x 768 SVGA modes for most popular SVGA video cards. Proprietary Color Quantization. Sun Country executables "run light" from the DOS prompt for low overhead with the most compact, optimized program modules possible. Now you can utilize the amazing resolution, differential scanning, full color capabilities of these remarkable scanning devices from an easy to use menu-driven, flexible package. 8-bit image processing capabilities for additional image modification.

List: \$300 Ours: \$269
FAXcetera #: 2989-0004 Return: N

SUNSHOW Image Converter 1.51 Sun Country Software

SUNSHOW Image Converter is a menu driven, raster-based, image file format conversion utility with a contemporary control panel interface, 3D buttons and mouse point-and-click. Supports importing/conversion of most 8-bit formats up to 1024x768x256, plus 16-bit, 24-bit Targa. Includes Edsun CEG and New JPEG compression support. Formats: BMP, CUT, CEG, GIF, IMG, IFF, PCX, TGA, TIF 4.2/5.0, Rix VMG, and PC Storyboard. SuperVGA and CEG drivers, image diagnostics included.

List: \$250 Ours: \$225
FAXcetera #: 2989-0006 Return: N

INFORMATION MANAGERS

Linkstant Draiken Software

Linkstant 3.0 is a powerful information management application designed for use by technical support and related departments to professionally manage customer account communications. Linkstant is designed for high speed processing of incoming customer telephone calls in a complete and professional manner. Technically advanced features allow users to create, access and assimilate information, generate reports, and document up to date customer activities.

List: \$249 Ours: \$225
FAXcetera #: 1002-5901 Return: F

MULTIMEDIA, AUTHORING

INSTANT REPLAY PROFESSIONAL (IRPRO) 2.5

Instant Replay Corporation
IRPRO is an authoring/development software system for the creation of: 1) Demo disks and software ads, 2) tutorials, training materials, CBT, 3) professional presentations: a) Laser disk based, and b) computer managed slide shows. IRPRO manages the capture of audio, video, graphics animations, and compressed video for incorporation into your presentation. Royalty free distribution. DOS based for compatibility with over 80% of the PC installed base.

List: \$795 Ours: \$619
FAXcetera #: 1760-0001 Return: F

MATHEMATICS

CtrlGauss Mod. 1 Transformation and Analysis

Aptech Systems, Inc.
CtrlGauss provides the tools to analyze and design automatic control systems. Both transfer function, and state-space representations are catered for in both continuous and discrete forms. It provides functions for building systems and displaying their characteristics for analysis. Do frequency domain design on both continuous and discrete systems using Nichols, Nyquist, Bode and Root Locus plots and simulate the results. Requires GAUSS-3861 3.0

List: \$295 Ours: \$265
FAXcetera #: 1669-0001 Return: L

SEE
SPECIAL
BUNDLE
OFFERS ON
PAGES 8 & 9
AND 19
OF
THIS ISSUE!

For FAXcetera®
instructions
See
page 176!

MATLABTM

NEW!
Neural Network Toolbox
Now Available

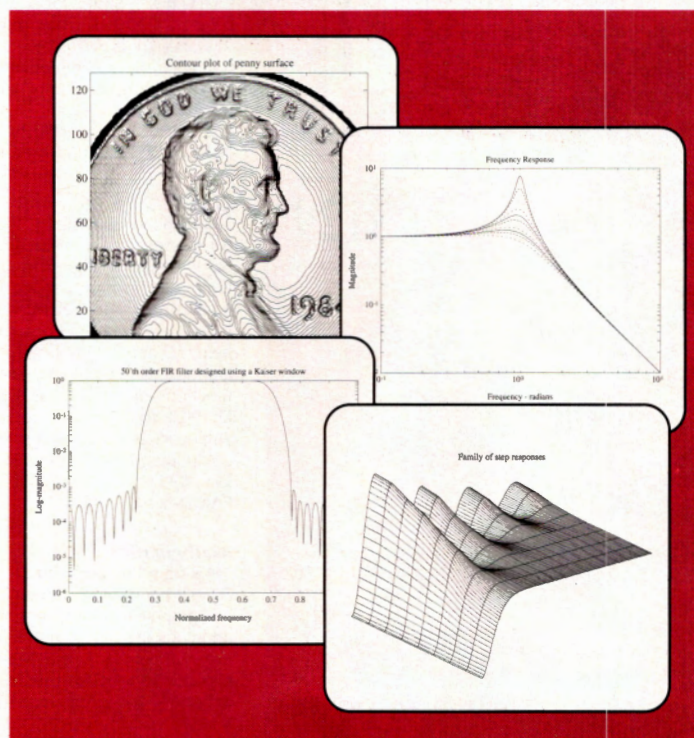
High Performance Numeric Computation and Data Analysis

MATLAB has rapidly become an industry standard for engineering and scientific research. Its unique interactive interface, algorithmic foundation, easy extensibility, and speed make MATLAB the software system of choice for *high productivity and high creativity* research.

Problems and solutions are expressed just as they are written mathematically — *without the need for traditional programming*. As a result, you can solve numerical problems in a fraction of the time required to write a program in Fortran, Basic, or C. Then plot the results as 2-D and 3-D graphics, with publication-quality output to plotters, dot-matrix printers, and laser printers.

"I can create algorithms so easily that it almost seems like cheating."

*Personal Engineering &
Instrumentation News*



Over 300 Built-In Functions

- eigenvalues
- matrix arithmetic
- matrix decompositions
- convolution
- spectrum estimation
- complex arithmetic
- 1-D and 2-D FFTs
- filtering
- curve fitting
- cubic splines
- Bessel functions
- elliptic functions
- nonlinear optimization
- linear equation solving
- differential equations
- polynomial arithmetic
- descriptive statistics
- 2-D and 3-D graphics

Plus Toolboxes For:

- digital signal processing
- parametric modeling
- control system design
- optimization
- chemometric analysis
- more

"MATLAB is the undisputed choice for computation-intensive engineering work."

Macworld

"MATLAB's power and ease of use go a long way toward taking the drudgery out of repetitive analysis projects."

IEEE Spectrum

Add to MATLAB your choice of tools for digital signal processing, system identification, control system design, and more. MATLAB's open system design lets you see the algorithms and the implementations, even change them to suit your specific requirements.

MATLAB is developed by The MathWorks, a leader in software for data analysis and mathematics. Our users — in thousands of companies and universities — know that MATLAB enables them to work more creatively and productively. Take a look at how MATLAB can do the same for you.

Computers Supported:

PCs and ATs
386/486 PCs
Macintosh
Sun
Apollo
IBM RS/6000
HP 9000/300/400
HP 9000/700
DECstation
VAX/VMS
VAX/Ultrex
Convex
Cray
and more

To find out more about MATLAB, call us at (508) 653-1415.
Or simply return the completed coupon to the address below.
Dealer inquiries are invited. Please call (508) 653-1415x439.

Name _____
Company _____
Dept/MS _____
Address _____
City, State _____
Zip _____ Country _____
Telephone _____
Computer(s) _____



Cochituate Place
24 Prime Park Way
Natick, MA 01760-1520
Phone: (508) 653-1415
Fax: (508) 653-2997



CUPL

\$129

CUPL is an industry standard PLD/FPGA design entry language for digital design engineers. CUPL compiles Boolean and State Machine logic equations into JEDC files required for a programmer to program the fuses. CUPL reduces the logic design using 5 different minimization algorithms. The product is available on DOS, Windows, Unix and Macintosh machines.

**LOGICAL
DEVICES, INC.**

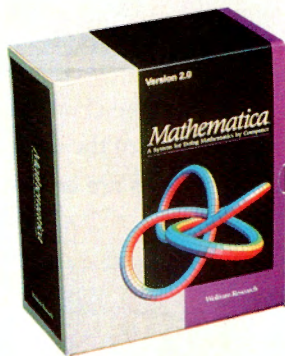
To order call
Programmer's Paradise!
(800)-445-7899

1201 NW 65th Place
Ft. Lauderdale, FL 33309
(305) 974-0967

NEW VERSION

Mathematica®

A system of doing numerical, symbolic, and graphical computation used both as an interactive calculation tool and a programming language. Numerical capabilities include arbitrary precision arithmetic and matrix manipulation. On systems with a sophisticated graphical user interface, users can create "Notebooks" that mix input, graphics, text, and sound. Generates graphics in postscript form.



Call Programmer's Paradise
to order today!
800-445-7899

Wolfram Research

CUPL

Logical Devices, Inc.

CUPL is an industry standard PLD/FPGA design entry language for digital design engineers. CUPL compiles Boolean and State Machine logic equations into JEDC files required for a programmer to program the fuses. CUPL reduces the logic design using 5 different minimization algorithms. The product is available on DOS, Windows, Unix, and Macintosh machines.

List: \$150 Ours: \$129

FAXcetera #: 2774-0001 Return: N

GAUSS-386i 3.0

Aptech Systems, Inc.

A fast, extendable, interactive matrix-based programming environment with built in mathematical function. Features 32-bit protected mode operation, a built in editor, source level debugger, on-line help, 2D and 3D publication quality graphics, virtual memory and over 400 functions including LINPACK and EISPACK routines. Ideal for scientists, engineers, and statisticians doing computationally intensive tasks.

List: \$995 Ours: \$899

FAXcetera #: 1669-0002 Return: L

Mathematica

Wolfram Research, Inc.

A system for doing numerical, symbolic, and graphical computation used both as an interactive calculation tool and a programming language. Numerical capabilities include arbitrary precision arithmetic and matrix manipulation. On systems with a sophisticated graphical user interface, users can create "Notebooks" that mix input, graphics, text, and sound. Generates graphics in PostScript form.

List: CALL Ours: CALL

FAXcetera #: 2014-0001 Return: L

SimGauss 386 V2.0

Aptech Systems, Inc.

A fully interactive non-linear simulation module written in the GAUSS programming language. SimGauss provides a fast easy way to simulate non-linear differential equations and state-space systems, such as vehicle dynamics, biological systems and economic models. The module provides extensive user control. Comprehensive documentation and on-line help are included. Requires GAUSS-386i 3.0

List: \$379 Ours: \$339

FAXcetera #: 1669-0003 Return: L

SIMULINK™

The Mathworks, Inc.

SIMULINK is a powerful, interactive software package for modelling, analyzing, and simulating dynamic non-linear systems. SIMULINK employs a graphical, mouse-driven interface based on X Windows, Microsoft Windows, and Macintosh windowing systems. System models can be defined either as block diagram structures or by sets of differential equations. SIMULINK supports linear, non-linear, continuous-time, discrete-time, multivariable, multi-rate, and hybrid systems. Fully integrated with the MATLAB numeric computation software environment and the MATLAB application toolboxes, SIMULINK is well-suited to solving a broad range of system simulation problems.

List: \$3995 Ours: CALL

for Mac: List: \$3995 Ours: CALL

FAXcetera #: 1695-0003 Return: F

386 MATLAB™

The Mathworks, Inc.

MATLAB is an interactive, programmable software system for high-performance numeric computation in scientific and engineering applications. It combines numerical analysis, matrix computation, and 2D/3D graphics, with an easy-to-use interface where problems and solutions are expressed mathematically without the need for traditional programming. Optional MATLAB Application Toolboxes for signal processing, control system design, parametric modelling, neural networks, chemo-metrics, optimization, and system simulation add specialized functions for a broad range of applications.

List: \$1595 Ours: CALL

PC-MATLAB 286

List: \$695 Ours: CALL

MATLAB for Macintosh

List: \$795 Ours: CALL

FAXcetera #: 1695-0002 Return: F

PRESENTATION GRAPHICS

Freelance Graphics for DOS

Lotus Development

Lotus Freelance Graphics for DOS is a major upgrade to Freelance Plus, the product rated #1 by Software Digest in 1989 and 1990. Freelance Graphics for DOS gives you all the presentation management, charting, and drawing/editing tools needed to create professional-looking color 35mm slides, as well as color or black and white overheads or printouts. The new version is designed to further simplify the process of creating professional presentations by making it faster, easier and more automated than ever.

List: \$495 Ours: CALL

FAXcetera #: 4000-0007 Return: F

PROJECT MGMT.

Harvard Project Manager 3.0

Software Publishing Corporation

Harvard Project Manager 3.0 makes it easy to plan, schedule, track and present projects to others effectively. Build and manage projects your way. Choose one of six methods for planning and managing projects: Fast Track, Work Breakdown Outline and Structure, PERT chart, Gantt chart, and task list. Other features include: one-key access to integrated sub-projects, multiple synchronized windows, EMS support for improved performance, and direct import and export of Lotus 1-2-3, dBASE II, dBASE III, and delimited ASCII files.

List: \$695 Ours: \$543

FAXcetera #: 2093-0006 Return: L

TimeLine 5.0

Symantec Corporation

Time Line 5.0 allows you to more accurately plan and manage your projects. An innovative set of resource management facilities helps you effectively model reality, so you can bring your projects in on-time and on-budget. Workgroup facilities—including multi-project-control—let you create a network-wide project management system that better coordinates your entire organization. Innovations such as Resource Contouring and Split Effort™ let you create more accurate and shorter schedules. And Individual Resource Calendars make it easy to schedule vacations and equipment downtime. You can even account for inflation and productivity changes with Varying Resource Cost Rates and Availability.

List: \$695 Ours: \$487

FAXcetera #: 2132-0024 Return: L

GFA-CAD for Windows.

A low-cost, easy-to-use CAD program for the home user, yet powerful enough for professionals.

Whether you're building a deck or rearranging a den...designing a new kitchen, family room, or maybe a clubhouse for the kids...planning a plumbing or electrical installation...or a professional engineer designing automobile, airplane, computer, or other components, GFA-CAD gives you a full range of computer-aided design capabilities found only in systems costing thousands more.

For the occasional user

GFA-CAD features an easy-to-use point-and-click user interface which provides access to all drawing functions. The system is easy to learn, has on-line help, and includes a library of hundreds of commonly used architectural, mechanical, electrical, and electronic symbols.

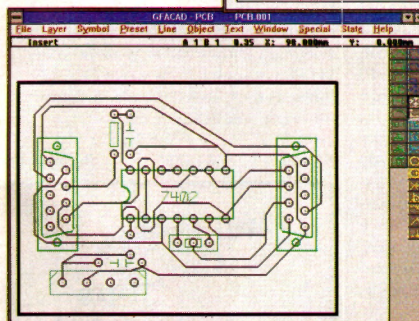
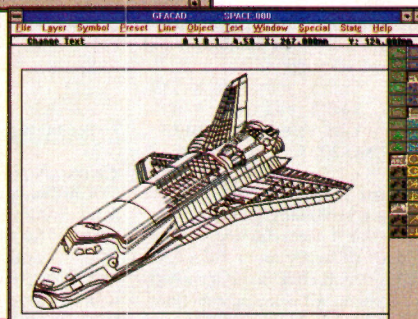
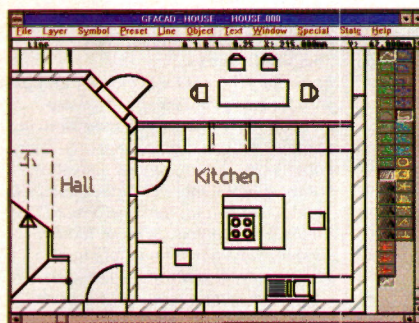
For the professional user

GFA-CAD provides up to 16 layers, auto dimensioning, and auto snap between layers...to particular points...or to calculated or reference positions. It also features:

- ☐ 3-D projections in kavalier, isometric, and dimetric.
- ☐ Spline functions (open and closed), equidistant polygons.
- ☐ Surface hatching with lines or user-defined patterns.
- ☐ Raster functions to draw lines between points containing objects.
- ☐ Coordinates of a drawing function can be entered via keyboard.

GFA-CAD supports DXF import/export and Windows Metafile export.

To order your copy of GFA-CAD at this special price, call GFA Software at 800-766-6GFA. Comes with a 90-day money-back guarantee.



GFA-BASIC "QB" for Windows.

Low cost and easy to learn for casual users, yet powerful enough for professionals.

If you know BASIC and want to write programs for Windows, or have QuickBASIC programs to port to Windows, GFA-BASIC "QB" is one tool you don't want to be without.

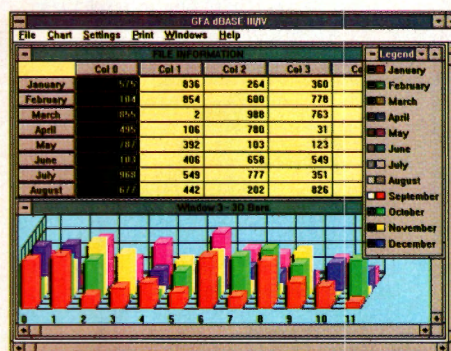
Easy to use for the casual programmer

- ☐ Context sensitive on-line help, cut and paste example code into editor.
- ☐ Draw Windows GUI with mouse using GFA's Visual Development Tool.

Powerful enough for professional developers

- ☐ Over 800 commands and functions.
- ☐ Advanced graphics library does spline, stretch, Bezier curve, and more.
- ☐ Advanced Math functions for statistics, trigonometry, and more.
- ☐ Direct COM port access without additional libraries.
- ☐ Arrays up to 20Mb, including a full set of Matrix commands.

To order your copy of GFA-BASIC "QB" at this special price, contact GFA Software at 800-766-6GFA. Comes with a 90-day money-back guarantee.



Optional dBASE engine includes functions for reading, updating, deleting, and locking dBASE III/IV records and indices.

"Its language features make GFA-BASIC a far more powerful tool than VisualBasic. All but a few Windows specific calls written in GFA-BASIC for Windows can be ported to GFA-BASIC for DOS. You can create a DOS application in either text or graphics mode, complete with multiple windows, menus, and scroll bars.." ...PC Magazine, 6/16/92

"I moved 200K of QuickBASIC program files to GFA in four days." ...Bill Mongan, THE NEW ENGLAND.



GFA Software Technologies, Inc.
27 Congress Street
Salem, MA 01970
Fax (508) 744-8041
1-800-766-6GFA

WINDOWS

CAD

DC/CAD Basic 4.0

Design Computation, Inc.
DC/CAD has schematic capture, PCB layout and auto-routing. It is a multi-purpose editor that provides symbol creation, automatic parts placement, Gerber, DXF, Library browser, Design Rule Check, Excellon Drill, BOM, penplot, Photoplot, Laserjet, Postscript & Dot matrix, w/ASCII file format and automatic copper plane w/cross-hatching and Window 3.0/DOS task. TERMINATOR is presently the most powerful Rip-up and Retry router w/SMT support.

List: \$ 595 Ours: \$ 535
386: List: \$ 995 Ours: \$ 899
Professional: List: \$1995 Ours: \$1799
FAXcetera #: 1000-2001 Return: L

GFA-CAD for Windows

GFA Software Technologies, Inc.
For the occasional user who might be designing a deck or family room, GFA-CAD features a "point-and-click" interface which provides access to all drawing functions. The system is easy to learn, has "On-Line Help", and includes a library of hundreds of commonly used architectural, mechanical, electrical and electronic symbols. The 40 most frequently used can be included into a menu. After that, the symbols can be invoked directly with the function keys or the mouse. For the professional user, GFA-CAD provides up to 16 layers, auto dimensioning, and auto-snap between layers to particular points, or to calculated or reference positions. It also features 3D projections, spline functions, surface hatching, and raster functions to draw lines between points containing objects.

List: \$99 Ours: \$89
FAXcetera #: 3614-0004 Return: F

NAPCAD/3D for Windows

Napier Graphics
Powerful 3D CAD for Windows, complete with C++ source! Advanced surface creation and editing tools make drawing complex objects a snap. Supports lines, cubic spline curves, circles, polygons, cones, spheres, true 3D surface patches, sweeps, extrusions, and much more. Multiple viewpoints, 3D text, hidden surface removal with multiple light sources, layers and printing are also supported. Mouse required. Supports Borland C++ with ObjectWindows (3.0/3.1). No Royalties.

List: CALL Ours: CALL
FAXcetera #: 1004-9701 Return: L

COMMUNICATIONS

Crosstalk for Windows

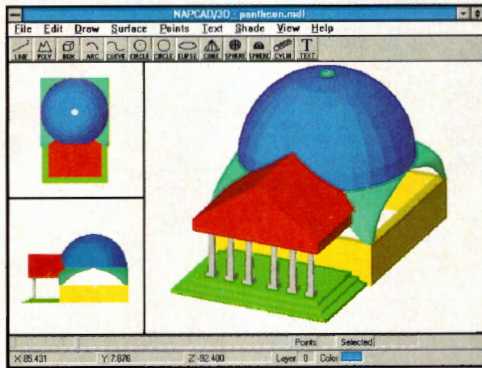
DCA/Crosstalk
A full-featured communications package designed for Microsoft Windows. Emulates popular terminals and transfers files using all the major protocols. Comes with an easy-to-understand script language. Share data with other Windows applications through DDE. Background operation allows you to work on other Windows applications while Crosstalk transfers files, answers calls, or performs other communications tasks.

List: \$195 Ours: \$121
FAXcetera #: 2744-0001 Return: L



Read pages 11 & 12.

NAPCAD/3D Solid Modeling for Windows



Includes C++ Source!
Just \$99

Powerful, yet easy to use 3D solid modeling for Windows. Advanced surface creation and editing commands make drawing complex objects a snap!

- Lines, curves, circles, polygons
- Cubes, cones, spheres, hemispheres
- Sweeps, extrusions, cross sections, fillets
- True 3D surface patches
- Hidden surface removal with multiple light sources
- User-definable 3D text and symbol libraries
- Print to any graphics printer supported by Windows
- Named layers, 256 color support, and much, much more!
- Includes fully-commented C++ source code
- Supports Borland C++ with ObjectWindows
- No royalties



Napier Graphics

To order call: 800-445-7899

3212 20th SE - Auburn, WA 98002

DynaComm Asynchronous for Windows 3.0

FutureSoft
The award-winning DynaComm for Windows is the best solution to your communications needs. DynaComm boasts 14 terminal emulations, 7 file transfer protocols, and extensive LAN support. It provides automated logons to 8 popular on-line services and a rich scripting language to automate tasks and construct new Windows front-ends.

List: \$249 Ours: \$159
FAXcetera #: 2307-0001 Return: L

Procomm Plus for Windows

Datastorm Technologies, Inc.
The most popular, most powerful, easy to use communications software package for the Microsoft Windows environment available today. Procomm Plus for Windows includes 34 popular terminal emulations with keyboard remapping; several file transfer protocols including ZMODEM; a fully automated dialing directory with advanced set-up options; an extremely powerful script language with Windows-specific enhancements; DDE (Dynamic Data Exchange) support; and a GIF On-line Viewer.

List: \$149 Ours: \$134
FAXcetera #: 3124-0002 Return: O

Remotely Possible/DIAL

AVALAN Technology, Inc.
AVALAN Technology now offers "Remotely Possible/DIAL" one of the first true WINDOWS based dial-up remote control packages. Supports a wide variety of modems and includes file transfer and chat mode. Perfect for those that work from home or telecommuters who need files back at the office, it allows access as though the user were working directly on the remote PC. "You can be in your office

anywhere in the World". It offers full mouse and keyboard support, data compression and security features. LAN version also available.
List: \$199 Ours: \$169
FAXcetera #: 3183-0001 Return: F

TERRANOVA for Windows AT&T

TERRANOVA is a windows driven network software package that allows PC users to integrate computers, networks, and application software into an easy-to-use solution. Includes the necessary tools to take stand-alone, separate components and create a network solution. Includes the necessary tools to take stand-alone, separate components and create a network solution. Features like our Central Software Administration, Remote Print Spooling, and Remote Command capabilities allows you to become an active part on the corporate network.
List: \$245 Ours: \$221
FAXcetera #: 1002-4004 Return: L

INFORMATION MANAGERS

AceFile for Windows

Ace Software Corporation
AceFile 20 for Windows winner of the Windows Magazine 1992 Win Award is an intuitive personal data manager. AceFile provides multiple views—form, report, labels, list, mail-merge, crosstab and 16 different graphs/charts—all with colorful 3D effects and toolbars. Easy to build expressions and indexes—report and analyze information from multiple files. Use new or existing data (dBASE, LOTUS, 1-2-3, Excel, or ASCII files. Network compatible.
List: \$149 Ours: \$149
FAXcetera #: 1004-1301 Return: O

Best Comm Software for Windows!

DynaComm for Windows boasts 15 popular terminal emulations including the new DEC VT340. It supports 7 different file transfer protocols including ZModem



and offers extensive LAN support for Novell's LAN WORKplace, DEC LAT and Pathworks, and 14 other popular network connections.

DynaComm offers pre-set log-ons to popular bulletin board services like Compuserve and a unique queue dialer which allows up to 200 addresses per

directory. For power users, DynaComm's rich scripting language includes over 350 commands and functions to automate tasks and construct new Windows front-ends for old applications. New Wave and OS/2 disks are available. In 1991, DynaComm was rated Best Comm Software by PC Week and PC Magazine, and InfoWorld.



713-496-9400 • FAX: 713-496-1090

APPLICATION SOFTWARE

PROCOMM PLUS®

for Windows

DATASTORM TECHNOLOGIES, INC.



The most popular, most powerful, easy to use communications software package for the Microsoft® Windows™ environment available today!

PROCOMM PLUS for Windows includes: 34 popular terminal emulations with keyboard remapping; several file transfer protocols including Zmodem; a fully automated dialing directory with advanced setup options; an extremely powerful script language with Windows-specific enhancements; DDE (Dynamic Data Exchange) support; and a GIF On-line Viewer.

TO ORDER CALL
PROGRAMMER'S PARADISE
TODAY!

800-445-7899

Introductory offer

SRP: \$149 OURS: \$99

GRAPHICS

Corel DRAW! 2.0

Corel Systems Corporation

The ideal PC graphics package. Fun and easy to use, it offers amazing type control and drawing power in a value-packed program. You get over 100 fonts and 300+ clip art images, with thousands more available. From Bezier curves and calligraphic pens to an autotrace program and a font converter, Corel DRAW! has what you need.

List: \$ 695 Ours: \$ 459

CD-ROM List: \$1395 Ours: \$1256

FAXcetera #: 2079-0001 Return: N

Designer 3.1

Micrografx

Micrografx Designer 3.1 is the only precision illustration package for Windows. Snap-to grid and object snap allow precision in creating and editing technical illustrations, desktop publishing and graphic design. Prepare color separations and design with color in standard and custom gradient shapes. Designer features text-on-a-curve, up to 64 layers, WYSIWYG, high performance batch printing and import/export to word processing, graphics and desktop publishing.

List: \$695 Ours: \$497

FAXcetera #: 2062-0001 Return: L

Hijaak for Windows Inset Systems

Hijaak for Windows is the indispensable graphics tool that converts, captures, views, enhances, and prints images. Support for 24 raster formats [plus hundreds of "flavors" of TIFF], 16 vector formats, and 25 popular fax card formats. Capture graphics screens from Windows and text and graphics screens from DOS applications.

List: \$249 Ours: \$189

FAXcetera #: 1976-0003 Return: L

TRAINING

Exploring Controls

Microsoft University

This video course helps experienced software developers understand how to implement controls for applications in Microsoft Windows. It explores various controls, edit controls, list boxes, combo boxes, scroll bars, and custom controls. Technical concepts are visually illustrated through 3D animation and reinforced through hands-on lab exercises and a student guide. It takes approximately 12-24 hours to complete the course.

List: \$495 Ours: CALL
FAXcetera #: 1002-5403 Return: L

Upgrading to Microsoft Windows 3.1

Microsoft University

This video course helps experienced Windows 3.0 support professionals learn the new features of Windows version 3.1 and gain the technical expertise needed to support the upgrade. Students will learn to optimize Windows 3.1, automate setup over a network, and troubleshoot common problems. Technical concepts and skills are visually illustrated through demos and 3D animation, and reinforced through hands-on lab exercises and a student guide. It takes approximately 8-10 hours to complete this course.

List: \$395 Ours: CALL
FAXcetera #: 1002-5402 Return: L

Keep our number at
your
fingertips!



OUTSIDE IN



The quickest way to bring
DOS files to Windows
and more...ONLY \$59

Outside In for Windows gives you access to any file at any time. Use it to view word processing, spreadsheet and database files. Outside In supports DOS, Windows and Macintosh files.

Outside In will copy all or part of a file to the Windows Clipboard with formatting intact. You can paste the data anywhere in Windows.

Outside In searches for files across drives, directories and networks to find the exact file you want. It also launches applications and prints files.

Use **Outside In** as a stand-alone utility or install it as a part of the Windows File Manager, Norton Desktop, Microsoft Mail or your favorite Windows word processor. SRP: \$89

To order call
(800) 445-7899

SYSTEMS
COMPATIBILITY
CORPORATION



Upgrading to Microsoft Windows 3.1—Additional Student Materials

Microsoft University
Set of additional materials (student guide and lab diskettes) for Upgrading to Microsoft Windows 3.1 video course. Helps experienced Windows 3.0 support professionals learn the new features of Windows version 3.1 and gain the technical expertise needed to support the upgrade.

List: \$99 Ours: CALL
FAXcetera #: 1002-5402 Return: L

Windows Teach 1.1

IntelligenceWare

An interactive system that teaches MS-Windows programming quickly and easily with graphic tutorials, hypertext, and stepwise source code annotations and explanations. A wide range of Windows applications are learned, including event-based programming, icons, hypermedia, device independent graphics, and multi-document interfaces.

List: \$123 Ours: \$111
FAXcetera #: 1798-0002 Return: N

WORD PROCESSING

Ami Pro for Windows 2.0

Lotus Development

The Windows-based word processor picked by users and industry experts alike as "easiest to use, easiest to learn and best overall." Has the power of serious word processors, with more practical graphics features than any other Windows word processor, such as charting, graphing and easy-to-use drawing. Tables performing basic math, DDE links, and style sheets combine with WYSIWYG display, unique dialog boxes and "Frames", to make every document look professional.

List: \$495 Ours: \$340
FAXcetera #: 4000-0012 Return: F

Word for Windows 2.0

Microsoft Corporation

The leading word processor designed for the Windows environment, makes everyday work easy. With the Toolbar, tasks such as creating tables, bullets, columns, charts, and drawing are just a mouse click away. Automatically creates envelopes. Check spelling with a click of the mouse. Print Merge Helper assists in the creation of form letters. Move from other word processing programs with virtually no downtime.

List: \$495 Ours: \$339
FAXcetera #: 1269-0004 Return: L

WordPerfect 5.1 for Windows

WordPerfect

At WordPerfect Corporation, we've taken the world's number one selling word processor, combined it with a graphical user interface (GUI), and created a program that's versatile and fun, yet powerful enough to be called WordPerfect. WordPerfect 5.1 for Windows has a look and feel that makes it incredibly intuitive and simple to use.

List: \$495 Ours: \$299
FAXcetera #: 2401-0003 Return: L

The Writer's Toolkit

Systems Compatibility Corporation

The Writer's Toolkit provides all the tools to improve your writing. Access the grammar, style and spelling checker; dictionary; thesaurus with definition; quotation reference; abbreviation program and more. These tools will make your writing powerful, precise and persuasive. The Writer's Toolkit is available for both DOS and Windows.

DOS List: \$129 Ours: \$116
Windows List: \$129 Ours: \$116
FAXcetera #: 1001-2004 Return: F

APPLICATION DESCRIPTIONS



FastTrax 4.0

FastTrax, the best disk optimizer, speeds up your hard disk and extends its life. *FastTrax's* unique "in-cylinder" technique makes it more efficient than any other defragmenter. *MakeTrax* (included) allows you to place files, directories and free space for best performance. *FastTrax* is fast, safe and can handle any DOS disk, including partitions larger than 1 gigabyte. Offers batch operation and power failure protection. Awards include *PC Magazine's* "Editor's Choice" and *Byte's* "Award of Distinction."

\$59

To order call Programmer's Paradise!
(800)-445-7899

FASTTRAX INTERNATIONAL

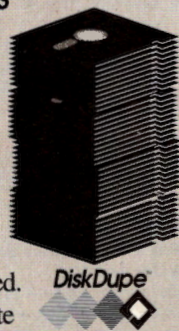
880 Ensenada Avenue • Berkeley, CA 94707 • (510) 525-3510

DUPLICATE DISKS FAST!

"DiskDuke does everything you'd want a disk duplication utility to do... and does it FAST!"

-- Jeff Duntemann, *PC TECHNIQUES*

DiskDuke duplicates, formats and compares disks **up to 6 times faster than Dos** with **no swapping!** Talks directly to the floppy controller for maximum speed. **Converts** 5.25" to 3.5". **Senses disk changes** without a keystroke. Detects bad disks to ensure **perfect copies**. Stores disk images on hard disk. **Automatically formats** disks if needed. Offers easy-to-use pulldown menus or complete command line control. **DiskDuke Pro** also serializes, makes disk sets, makes customized disks, supports four drives and 2.8Mb drives.



Order today! 800-445-7899
Money Back Guarantee!

DiskDuke \$79
DiskDuke Pro \$179

Micro System Designs, Inc.
10062 Miller Ave. #104, Cupertino, CA 95014
Phone: 408-446-2066 Fax: 408-446-2095

DIAGNOSTIC

PC Probe

Landmark Research International Corp.
PC Probe saves you time and money when your PC acts up. In one easy-to-use package you get Diagnostics, Benchmarks, Utilities, and SysInfo. Test your system board, RAM, video, keyboard, com ports, floppy & hard drive, and more. Locate fading RAM. Tests run in batch or single pass, remote or on-site. Utilities include virus protection, AT CMOS editor, LM Speed Test, and more. On-line manual includes troubleshooting tips. Loopback plugs. For all IBM & compatibles using DOS 2.0 or higher.
List: \$99 Ours: \$85
FAXcetera #: 0812-0001 Return: F

SpinRite II 2.0

Gibson Research Corporation
SpinRite II virtually eliminates the cause of such common DOS errors as "Sector Not Found," "Boot Failure," "Bad Sector Error," and all other data-related "Abort, Retry, Ignore" style errors. Identifies, diagnoses and repairs every form of hard drive that uses standard DOS partitions. It's extensive "worst-case" data pattern testing is performed on all drive types, including IDE and SCSI, and finds all disk surface flaws, moves endangered data to safety and prevents flawed areas from being used again. Optimizes sector interleave on most MFM, RLL, and some ESDI drives to deliver the maximum hard disk data transfer rate, and also restores the drive's low-level format to a like-new condition.
List: \$89 Ours: \$79
FAXcetera #: 0812-0001 Return: F

DISK/DOS

DiskDuke

Micro System Designs
DiskDuke duplicates, formats and compares disks up to six times faster than DIS. Copies even high density disks in a single drive with no swapping. Automatically formats, if needed. Detects bad disks to insure perfect copies. Stores disk images on hard disk. Senses disk changes without a keystroke. Converts 5.25 to 3.5. Offers pulldown menus or complete command line control.
List: \$79 Ours: \$71
FAXcetera #: 2897-0001 Return: F

DiskDuke Pro

Micro System Designs
Includes the same features as DiskDuke, plus the following: serializes each disk by automatically searching for a user defined string and replacing it with a unique serial number; quickly makes sets of disks or customized disks, turbo charges duplication with "Track Range" which formats only the data area, supports four drives, supports the new double speed and 2.8MB drives.
List: \$179 Ours: \$155
FAXcetera #: 2897-0002 Return: F

We ship Worldwide!



FastTrax

FastTrax International
FastTrax, the best disk optimizer, speeds up your hard disk and extends its life. FastTrax's unique "in-cylinder" technique makes it more efficient than any other defragmenter. MakeTrax (included) allows you to place files, directories and free space for best performance. FastTrax is fast, safe and can handle any DOS disk, including partitions larger than 1 gigabyte. Offers batch operation and power failure protection. Awards include *PC Magazine's* "Editor's Choice" and *Byte's* "Award of Distinction".
List: \$70 Ours: \$59
FAXcetera #: 1005-1701 Return: F

The Norton Commander 3.0

Symantec
The leading DOS manager integrates file management, file viewers, application launching, PC-to-PC file transfer and E-Mail into one simple and consistent user interface. Swiftly navigate through directories and directory trees; perform DOS operations with one keystroke or mouse click; scan the contents of data files without running the application that created them; and much more.
List: \$149 Ours: \$108
FAXcetera #: 2132-0016 Return: F

Scroll & Recall 1.7e

Opt-Tech Data Processing
A memory resident screen and keyboard utility that allows you to conveniently scroll back through data that has gone off the top of your display screen. Up to 27 screens of data can be recalled or written to a disk file (great for documenting system operations). It also allows you to easily recall and edit your previously entered DOS commands without retyping.
List: \$69 Ours: \$60
FAXcetera #: 1416-0002 Return: L

FILE COMPRESSION

Software Bridge

Systems Compatibility Corporation
Software Bridge converts more than 50 DOS and Windows word processing, database and spreadsheet files for use with your favorite word processor. Converted files retain the formatting of the original document. Software Bridge automatically recognizes unknown formats and performs the correct translation. It also supports several popular Macintosh word processing formats.
List: \$149 Ours: \$135
FAXcetera #: 1001-2002 Return: F

Squish Plus 2.01

Sundog Software
Get up to 80MB on a 40 MB hard disk, 1.44 MB on a 720K floppy, or 2MB on a 1MB RAM disk—without any new hardware. It enlarges the capacity of any disk by compressing data (database, text, worksheet, font, graphic, etc.), and you're free to choose which files to compress. Unlike archive programs, Squish Plus is completely automatic and invisible. Squished files stay compacted on disk even while they're being used, and any program can use compressed files simply by referring to a new drive letter. It's totally compatible with all business and utility software: any database, word processor, spreadsheet, etc., and all backup, repair, cache, or file transfer programs. Optional encrypted passwords. Needs 36K (just 16K with EMS); runs on PCs, laptops, or DOS-based file servers.
List: \$100 Ours: \$90
FAXcetera #: 1696-0001 Return: L



Don't Shoot It, Troubleshoot It.

LANDMARK... the widest selection of PC diagnostic software, firmware, and hardware in the world!

PC WON'T BOOT? KICKSTART IT!

Don't replace your motherboard, use **KickStart 2™**. When serious hardware problems occur, nothing gets you up and running as fast. KickStart 2 *measures power within 2.5% on all four voltages, shows Power-On Self-Test (POST) failure codes, and features on-board ROM-based diagnostics* allowing you to determine and remedy the problem quickly, easily, and inexpensively!

Built-in serial and parallel I/O *allows for testing remote via modem, or simply logging results to a remote terminal, printer, or laptop.* You can configure your own test routines and store them in KickStart 2's battery backed-up CMOS RAM for quick future use. On-board switches, LEDs, and digital displays allow complete control over testing in systems lacking video or disk.

KickStart 2 is the ultimate **SECURITY CARD**, too. With two levels of password protection and pre-O/S activation, you can confidently prevent unauthorized use of your PC.

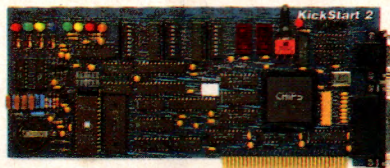
Includes serial and parallel loopback plugs and the Landmark **JumpStart™** AT ROM BIOS for testing ATs that don't issue POST codes. KickStart 2 works independent of your operating system. You can use it on DOS or UNIX systems. **CALL for current pricing.**



THE 5 MINUTE SOLUTION TO FLOPPY DRIVE FAILURE

With **AlignIt™** you can clean, diagnose, and align your floppy drives in minutes without a scope. Patented technology requires only a screwdriver to perform ANSI-accurate alignments (.3 mils).

AlignIt is ideal for corporate users with multiple PCs. The **GOLD STANDARD** feature allows you to align all your PCs to the same in-house standard, guaranteeing that all your floppies are perfectly interchangeable between PCs! Available in 3.5" or 5.25" for both high and low densities. **CALL for current pricing.**



*"The number of tests KickStart 2 can perform is mind-boggling... **IF THE KICKSTART 2 CAN'T FIND THE PROBLEM, IT PROBABLY EXISTS IN YOUR HEAD, not in the hardware.**"*

Rich Santalessa, Computer Shopper

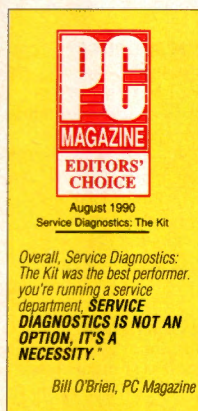
*"KickStart 2 system diagnostics board helps users check out virtually every aspect of a PC's hardware system... **THE BOARD IS A WORTHY INVESTMENT** for computer maintenance."*

David Claiborne, PC Week

PROFESSIONAL LEVEL PC TROUBLESHOOTING

Landmark **Service Diagnostics™** is ideal for professionals requiring the most exhaustive diagnostic test capabilities.

Service Diagnostics is not just a single product, but a complete LINE of products. It's comprised of software, hardware, and firmware so you can choose the best "tool" for the job.



*Overall, Service Diagnostics: The Kit was the best performer. you're running a service department, **SERVICE DIAGNOSTICS IS NOT AN OPTION, IT'S A NECESSITY.***

Bill O'Brien, PC Magazine

When your PC won't boot, you'll need **ROM POST** firmware, a plug-in chip that virtually "jumpstarts" the system to determine what's wrong. And, when your printer isn't working, you won't know whether it's the LPT port, cable, or printer without hardware, like our loopback plugs (which together with our software completely test the COM ports).

To provide you a complete troubleshooting resource, Service Diagnostics is offered in single modules or in "kits." Components include; CPU-specific software (PC, XT, AT, 386/486, PS/2), ROM POSTS (PC, XT, AT) and floppy alignment disks (3.5" and 5.25").

All the Service Diagnostics software modules are available in self-booting versions for use with non-DOS operating systems like UNIX.

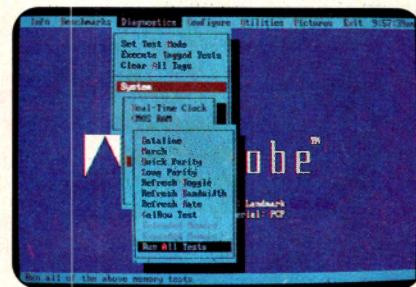
Service Diagnostics is powerful and flexible. Hundreds of tests can be performed on your motherboard, memory, video, COM ports, floppy and hard drives, printer, and more. **CALL for a customized quote on the kit that's right for you!**

PC DIAGNOSTICS MADE EASY

You don't need to be technical to use **PC Probe™**. With clear, intuitive, pull-down menus and 206 pages of on-line help, troubleshooting your PC is truly **MADE EASY!**

And, you don't have to be handy with a screwdriver to make PC Probe pay for itself. Just by providing a diagnostic report to your service and repair shop, you'll save money and receive quicker service.

PC Probe runs over 150 tests including; motherboard and CPU, memory, video card and display, keyboard, COM ports, floppy drive and controller, hard drive and controller, and more. Includes **VirusCure**, Landmark **Speed Test**, **AT SetUp** & loopback plugs. **CALL for current pricing!**



SLASH HARD DISK SET-UP TIME

If you install, upgrade, or maintain hard drives, then you need **DiskBase™**. It'll save you boat-loads of time and money by putting the exact hard disk information you need at your fingertips... whenever you need it.

DiskBase reveals 12 technical specs on over 2500 hard disk drive models and 8 technical specs on over 220 controllers. Once you've located the correct hard disk model, you can instantly bring up a listing of all compatible controllers. **CALL for current pricing!**

- Toll Free Tech Support
- 90 Day Money Back Guarantee
- Federal Express Shipping

CALL (800) 683-6696

FAX (813) 443-6603 • Int'l (813) 443-1331

LANDMARK
RESEARCH INTERNATIONAL CORPORATION
703 Grand Central Street • Clearwater, FL 34616

FILE TRANSFER

Common-Link 1.1

Pacific Micro

Common-Link allows SUN SPARC, IBM, RS, HP Interactive & SCO UNIX to read/write & format MAC & DOS diskettes. No cable or external hardware needed.

List: \$295 Ours: \$269
FAXcetera #: 3575-0001 Return: L

MAC-IN-DOS for Windows

Pacific Micro

MAC-IN-DOS allows PC to read/write & format Macintosh data files via high density diskettes & vice versa. No cable or external hardware needed.

List: \$199 Ours: \$179
FAXcetera #: 2575-0002 Return: L

OPTS (DOS Version)

S.D.A. Enterprises, Inc.

OPTS, an easy to use file conversion utility, translates documents from Unix troff, nroff, or mm macro formatting into DOS RTF form compatible with leading word processors (Word, WordPerfect). It also converts the other way from RTF to troff (and in the same session too!). It's the only commercially available product that converts in either direction. Table conversion from troff to RTF. OPT is also available for the Macintosh and SCO Xenix. Disk sizes: 3.5 and 5.25.

List: \$179 Ours: \$152
FAXcetera #: 3397-0001 Return: L

INSTALLATION

ddb

Knowledge Dynamics Corporation
ddb (Distribution Disk Builder), is a full-screen, point-and-shoot interface program that automates the entire process of building INSTALLable distribution disk sets. Files, directories and entire directory trees may be selected with just one keystroke causes ddb to build the entire compressed distribution set for INSTALL. ddb can be purchased separately, however, it is not a stand-alone program since it must be used in conjunction with INSTALL.

List: \$150 Ours: \$129
FAXcetera #: 0026-6002 Return: F

INSTALL

Knowledge Dynamics Corporation
INSTALL is a set of tools that automates the installation of any product distributed on diskettes or CD-ROM. INSTALL is configured using a script file (which is an easy-to-learn "installation language") that gives complete, precise control over the installation process. INSTALL handles all end-user errors, reduces disk costs by compressing data, detects the target computer's environment, modifies system files, and updates prior versions. Full source code, no royalties.

List: \$250 Ours: \$215
FAXcetera #: 0022-6001 Return: F

INSTALL PRO

Knowledge Dynamics Corporation
INSTALL PRO is a superset of INSTALL, it includes ddb, which performs the following additional function: automatically formats disks, builds or modifies script files, compresses files, and splits large files across multiple diskettes. ddb has a full-screen point-and-shoot interface to build distribution disk sets automatically. ddb creates a configuration file

which can be used to quickly generate new distribution disk sets for updates.

List: \$400 Ours: \$315
FAXcetera #: 0022-6002 Return: F

EZ-INSTALL 4.0

The Software Factory

Produces professional, comprehensive installation routines for software products. Reduces development time, ensures correct installation, reduces support calls. Includes menu-driven Installation Aid, which steps the developer through installation options, generates the installation configuration, then creates distribution disk(s). Checks/modifies user's CONFIG.SYS, AUTOEXEC.BAT, Windows .INI files, system environment, etc. Compression/file splitting utilities and screen builder included. Source included. No royalties.

DOS List: \$249 Ours: \$224
OS/2 List: \$349 Ours: \$315
Combo List: \$449 Ours: \$405
FAXcetera #: 2213-0001 Return: L

INSTALLIT

Helpful Programs, Inc.

Installer with extensive system/environment/network sensing. Automatic master diskette builder adds transparent CRC checking with state of the art compression ratios and speed for multi-volume disk sets. Edits system and binary files. Script language provides robust procedural control flow through internal and user-defined procedures and can run other programs. Easy generation of menus and dialog boxes. Removable copyright. No royalties or re-licensing. Specify national language.

List: \$149 Ours: \$119
FAXcetera #: 3235-0001 Return: F

INSTALLIT FOR WINDOWS

Helpful Programs, Inc.

A native Windows 3.X version of the INSTALLIT installer (See full description). Installs into program groups, shows bitmaps, edits WIN.INI, uses DLLs, and does basic screen graphics under script control to dress up your installations without source code involvement.

List: \$199 Ours: \$179
FAXcetera #: 3235-0002 Return: F

INSTALLIT MULTILINGUAL

Helpful Programs, Inc.

A version of the INSTALLIT installer (see full description which speaks English, Danish, French, German, Italian, Norwegian, Polish, Portuguese, Spanish, or Swedish as determined at master diskette build time. Easily translated into other single-byte languages (no source code involvement required).

List: \$249 Ours: \$225
FAXcetera #: 3235-0003 Return: F

InstallBoss

Kedwell Software

Installation program generator for MS-DOS based applications. Create .EXE installation programs without the need for programming or the use of script files. Includes compression utilities. Allows for modification of CONFIG.SYS and AUTOEXEC.BAT, selective installation, re-boot option, greeting, copyright messages and more. No run-time or license fees.

List: \$169 Ours: \$159
FAXcetera #: 3758-0003 Return: F

**Can PC read/write Macintosh floppy?
Can your SUN read/write
Mac & DOS disk?**

Mac-In-DOS for PC

- Allow PC to directly read/write/format MAC disks through PC's internal 3.5" floppy drive.
- Software only. No network or extra hardware is needed.
- Support DOS 3.3, DOS 4.1, and DOS 5.0.
- Access MAC System 6 & 7 high density 1.44 MB disk only.
- A version running on MS Windows 3.0 is now available.

Common-Link for Sun

- Allow SPARCstations running SunOS 4.0.3 or higher to directly read/write/format both MAC & DOS disks.
- Software only. No network or extra hardware is needed.
- Access Mac System 6 & 7 high density 1.44 MB floppies. Also access DOS 1.44MB & 720KB diskettes.
- Available in OPENLOOK or TTY interface mode.
- A convenient and inexpensive method of exchanging information in the heterogeneous computing environments.
- Common-Link is also available for Interactive, AIX, HP.

Pacific Micro

201-San Antonio Circle C250, Mt. View, CA 94040

Tel: (415) 948-6200 (415) 948-6296

**To order, call Programmer's Paradise
800-445-7899**

INSTALLIT™

EARTH'S FAVORITE INSTALLER™

• VERSION 3.0! •

*The Premier Worldwide Software Distribution System for
Windows • DOS • OS/2 and soon for PM, Unix and more!*

Thanks to our many friends around the world who helped us enhance INSTALLIT to version 3.0. Yes, we put almost all of your wishes in 3.0! Although the INSTALLIT script language is now more complete and powerful than ever, anyone can use INSTALLIT in scriptless mode for any size of application.

Our annual maintenance customers already have their automatic upgrade. If you are not an INSTALLIT shop, why not join us now as we move together to version 4.0 and beyond?

30-day FREE trial with a 90 day money back guarantee

BBS Demos (205) 880-8785 VISA-MC-AMEX-PO

DOS-OS/2 \$149 • Windows \$199

(Specify national language)

Source and multiple translations available

HPI

P.O. Box 16078 Huntsville, AL 35802 U.S.A.

Voice/Fax: (205) 880-8782

Orders: (800) 448-4154

Germany, Austria, Switzerland (49) 07-2361500

EZ-INSTALL

original

The Software Developer's Installation Tool

Now Your Software Can Have a Comprehensive, Professional Installation Routine in Minutes.....

...with EZ-INSTALL 4.0 !!

- Easy, flexible installation software featuring Installation Aid, our popular "quick start" facility
- File compression, file splitting
- CONFIG.SYS, AUTOEXEC, Windows .INI modification
- NO copyright screens
- NO copy protection
- NO royalties
- Source Included
- Free Technical Support
- Satisfaction Guaranteed
- Used by AT&T, Bell Canada, IBM, Intel, and thousands more

*"If you're in a hurry to get an installation program written, EZ-INSTALL is your best choice."
--- Data Based Advisor
Jan 1991*

The Software Factory INCORPORATED

EZ-INSTALL
...only \$249

13612 Midway Road Suite 246
Dallas, TX 75244
(214) 490-0835
FAX: (214) 490-9520

Visa/Mastercard
Discover/COD
Shipping \$5 (US)
\$9 (Canada), \$15 (others)
Texas residents add 8.25%

Pop-Up Hypertext Help

Knowledge Dynamics Corporation

Pop Up HyperText Help is a Terminate and Stay Resident (TSR) which allows instant access to volumes of information about INSTALL. Easy access is available to the following sections of the printed manual: reference section, language syntax, new features, keywords listed by functional categories, INSTALL utility program documentation, example script files, and much more. 100% Norton Guides compatible. Requires only 1K of RAM.

List: \$49.95 Ours: \$20
FAXcetera #: 0026-6003 Return: F

The Stork

Island Systems

Create a professional product installation without any programming or script files. Easy to use set of on-screen design tools assist in each step of a product installation. Features include: Customized menu interface, auto check of target system hardware, customized target directory structure, simulation mode facilitates test of installation and product, optional file compression, large files span multiple disks, auto edit of AUTOEXEC.BAT, CONFIG.SYS, creates and manages master disk set and more. No banners or royalties.

List: \$175 Ours: \$158
FAXcetera #: 2088-0002 Return: F

wINSTALL

Knowledge Dynamics Corporation

wINSTALL is a port of the award-winning MS-DOS version of INSTALL to Microsoft Windows 3.x. wINSTALL works as a GUI, and uses DDE to add a program to the Program Manager. It will also modify .INI files and add groups and icons to the Program Manager. wINSTALL will find and execute Windows if it is not already running, and will run a text-mode installation if it can't run under Windows.

List: \$400 Ours: \$339
FAXcetera #: 0026-6004 Return: F

LABEL MAKING

Label Matrix

StrandWare

Label Matrix, formally Label Master, prints any size label or form with bar codes, variable size text, lines and PCX Graphics. With built in database you can add or create your own files or use your existing database. Supports over 200 models of dot matrix, postscript, laser and thermal printers. It fully supports a mouse for faster speed in selecting menus and positioning the WYSIWYG cursor. Text and bar code images can be read in from dBASE III, Spreadsheet, ASCII or DIF file. Rotates text and bar codes.

List: \$479 Ours: \$399
FAXcetera #: 2831-0005 Return: O



Corporate Accounts:

(800) 422-6507

Power Label StrandWare

Power Label is an enhanced version of Label Master that prints any size label or form with bar codes, variable size text, lines, etc. It supports background printing to up to 4 dot matrix, laser, postscript or thermal printers at a time. PCX Graphics can now be selected from within dBASE, Spreadsheet, ASCII or DIF files to provide excellent graphical control. Design is accomplished using a mouse, which is included, and menus with graphical WYSIWYG interfaces. Text fonts and most popular bar codes can be printed at 0, 90, 180 and 270 degree rotations. Relational data file indexes and the capability to print selected records give Power Label exceptional database capabilities. Also prints batch headers, status reports and other items to help with cost accounting.

List: \$949 Ours: \$838
FAXcetera #: 2831-0004 Return: F

Quick Draw StrandWare

Quick Draw is a general purpose utility that prints lines, variable size text and over a dozen different types of bar codes onto any size label. It can also be used for printing address labels or sequentially numbered bar coded forms. Quick Draw is very user friendly with on screen layout utilizing WYSIWYG. Supports most dot matrix, laser and postscript printers with portrait and landscape mode possible on all printers. With Quick Draw, you can position any image to 1/1000 of an inch. Spreadsheet, Database or ASCII files can be imported into your label as text or bar codes.

List: \$259 Ours: \$209
FAXcetera #: 2831-0003 Return: F



DON'T DELAY!



CALL

Programmer's Paradise®

TODAY!

800-445-7899



Booth #420

SOFTWARE
DEVELOPMENT '92
FALL

WHY SETTLE FOR ANYTHING LESS THAN THE BEST?

You know the limitations other Windows™ installers impose on you. You want fully generalized dialog boxes without C programming or having to create a .DLL, a powerful script language, stunning screens, state-of-the-art compression, no royalties, and full C source code. You want a program that is intelligent enough to find and execute Windows™ if it's not already running, and one that will run as a text-mode installer if it can't run under Windows™.

Now, It's All Yours.

For the first time ever, the power, flexibility, convenience and quality of our award-winning MS-DOS and OS/2 INSTALL is available for Microsoft Windows™! wINSTALL™ raises the standards for Windows™-installation programs. wINSTALL™ provides all of the above features plus an .EXE file that is complete; no .DLL files are required, and no external data compression program is required!

As an engineer you know that when reliability is a factor, the fewer executable files, the better. Of course, wINSTALL™ also allows you to use DDE to modify .INI files, and to add groups and icons to the Program Manager.

wINSTALL® normally lists for \$399.⁹⁵, but, for a limited time, you can order wINSTALL® for \$100 off and also get Pop Up HyperText Help FREE (a \$49.⁹⁵ value)!

1-800-331-2783 ext. 204 - Sales
1-512-964-3958 - FAX
1-512-964-3929 - BBS
1-512-964-3994 - Tech Support
CompuServe: [76416,3214]

No ROYALTIES

FULL C SOURCE CODE

30-DAY MONEY-BACK GUARANTEE

KNOWLEDGE DYNAMICS CORP
P.O. Box 1558
Canyon Lake, TX 78130-1558
USA

wINSTALL® is a registered trademark of Knowledge Dynamics Corp. Windows™ is a trademark of Microsoft Corp.
©1992, Knowledge Dynamics Corp.

MEMORY MANAGEMENT

386MAX 6.0

Qualitas, Inc.

Winner of the 1991 Byte Award of Merit, PC Magazine's Editors Choice Award, InfoWorld Buyers Assurance Seal, and InfoWorld's Top-Scoring Memory Manager, 386MAX is perfect for both experienced and novice users. The new graphical interface seamlessly integrates memory management with a powerful system analyzer. After reliably recovering the most high DOS memory, your system is automatically optimized and configured for the most conventional memory. 386MAX has both ROMsearch and VGAswap and feature easy installation and optimization, a Windows-compatible disk cache, and SmartMemory.
List: \$100 Ours: \$64
FAXcetera #: 1888-0005 Return: F

386/VMM 4.0

Phar Lap Software

386/VMM is an add-in driver for 386IDOS-Extender which provides demand-paged virtual memory capabilities to Extended-DOS applications. 386/VMM allows you to run programs with memory requirements exceeding available RAM by swapping code and data out to a disk file. 386/VMM is compatible with version 2.2 or later of the Phar Lap tools, including 386IASM, 386LINK, and 386IDEBUG. Requires 386IDOS-Extender SDK.
List: \$295 Ours: \$265
FAXcetera #: 1490-0007 Return: F

AboveDISC 4.0

Above Software

Memory management utility for use on all IBM and compatible 386 machines, as

well as IBM and compatible 286 machines equipped with a NEAT chipset or EMS, EEMS, or XMA boards, or an ALL chargecard. Supports: Loading Device Drivers high (standard device drivers, as well as network drivers); loading TSR's high; extending DOS to 736K; backfilling to 640K on machines with less than 640K of conventional memory; and an extensive EMS diagnostics program.
List: \$120 Ours: \$107
FAXcetera #: 2732-0003 Return: N

Above Mem 1.0a

Above Software, Inc.

Directly accesses up to 1MB of extended memory as high speed expanded memory, specifically for 2.x versions of Lotus 1-2-3. Above Mem will also increase base memory from 640K to 736K on systems with EGA or VGA when not in the graphic mode.
List: \$80 Ours: \$72
FAXcetera #: 2732-0001 Return: N

BlueMAX 6.0

Qualitas, Inc.

Winners of the 1991 Byte Award of Merit, PC Magazine's Editor's Choice Award, InfoWorld Buyers Assurance Seal and InfoWorld's Top-Scoring Memory Manager, Qualitas memory managers are perfect for both experienced and novice users. Qualitas' new graphical interface seamlessly integrates memory management with a powerful system analyzer. After reliably recovering the most high DOS memory, your system is automatically optimized and configured for the most conventional memory. 386MAX has ROMsearch and VGAswap. And BlueMAX—the only memory manager specifically designed for the IBM OS/2—

has BIOS compression technology. Both feature easy installation and optimization, a disk cache and Smart Memory.
List: \$125 Ours: \$81
FAXcetera #: 1888-0006 Return: F

Boot Commander

V Communications

Allows you to select from up to 100 different configurations at boot time. Extremely flexible and easy to use. Even view your CONFIG.SYS and AUTO-EXEC.BAT prior to boot selection. Allows you to resolve TSR conflicts and provide the best configuration possible for your applications.
List: \$60 Ours: \$55
FAXcetera #: 1828-0008 Return: F

Dr. Switch-DevPak 2.0

Black & White International, Inc.

Allows you to swap all but 4K of Clipper, dBASE III PLUS, dBASE IV, FoxBASE+, FoxPro or Quicksilver applications out of memory. The DevPak allows you to run editors, word processors, report writers, graphics and backup utilities directly from any dBASE program. It also includes a keyboard stuffer for automating all or part of a program's operation. The DevPak can swap to EMS, XMS or to disk.
List: \$130 Ours: \$117
FAXcetera #: 1837-0003 Return: L

E-Mem

TeraTech

More memory, more speed, more fun. Allocates MegaBytes of RAM transparently using EMS or XMS from 1K to 16MB. Processes data all at once, in Extra Memory instead of disk, up to 18,000% speed gain.
List: \$99 Ours: \$89
FAXcetera #: 1972-0007 Return: F

EASISwap 1.0

Easy Automation Systems, Inc.

EASISwap enables virtually any DOS based software package to become a Terminate and Stay Resident (TSR) application. You can swap between programs with a single keystroke. EASISwap requires less than 5K and installs in just minutes. It will use expanded memory (if available) or the hard disk as needed to store programs away during swapping.
List: \$80 Ours: \$72
FAXcetera #: 2999-0006 Return: F

Memory Commander 2.1

V Communications, Inc.

Memory Commander gets the most out of your conventional, high and extended RAM. VGA graphics applications get up to 800K and text applications 920K of conventional DOS they can use! Quickest and easiest installation. High loads network drivers & TSRs. Video Accelerator speeds DOS functions up to 200%. MS-DOS 5.0 can get another 280K available for applications! Windows 3.0 compatible.
List: \$100 Ours: \$90
FAXcetera #: 1828-0007 Return: F



Your Order Now!

MEMORY LIM EMS HMA DOS 5.0 XMS BUFFERS UMB BLUEMAX QUALITAS 386MAX 486SX DRIVERS 386SX NETWORKS TSRs C&T 286 RAM PAGEFRAME IPX MEMORY BIOS CACHE

The best performance in memory.

We can't remember the last time one memory manager earned as much praise from so many experts as new 386MAX® 6 from Qualitas.

Praise like the PC Magazine Editors' Choice award. The BYTE Award of Merit for 1991. And top ratings from the editors of PC Week, InfoWorld and PC Computing, among others.

But then it's easy to understand. Because



no other memory manager maximizes system performance as easily, completely and automatically as new 386MAX 6. Even if you use DOS 5. Especially if you use Windows.

There's 386MAX 6 for IBM compatible 386 and 486 systems for just \$99.95 SRP. And BlueMAX™ 6, the only memory manager that delivers up to 250% more memory on all 386 and 486 IBM PS/2s for just \$124.95 SRP.



The Intelligent Memory Managers™

© 1992 Qualitas. Qualitas, 7101 Wisconsin Avenue, Suite 1386, Bethesda, MD 20814. All company and product names are trademarks or registered trademarks of their respective owners. System Requirements: Any 386, 386SX, 486 or 486SX PC or PS/2, min. 256K of extended memory, DOS 3.0 or higher, and hard disk drive. (386MAX also supports 286 machines with Shadow RAM, or any PC with EMS 4.0 hardware with 256K memory. Feature availability and memory recovery may vary on these systems.)

©1992
Voyager Software Corp

LiteSwitch 1.0

Software Interphase

LiteSwitch is a utility that allows almost any DOS-based program to become a TSR. You can call up the second program with a single keystroke. When you are finished with the second program, LiteSwitch returns you to the first program right where you left off. LiteSwitch will automatically use EMS, XMS, or hard disk to save the current state of the first program. LiteSwitch uses less than 7K memory (1.5K with EMS or XMS). Also works in all text and graphic modes. Requires DOS 3.1 or later. 3.5" disks available to registered users.

List: \$100 Ours: \$89
FAXcetera #: 1767-0007 Return: F

QEMM-386 6.0

Quarterdeck Office Systems

Hunts down memory-hogging Dos Resources, TSRs and drivers and load them into High Memory (the area between 640K and 1MB), so you can use more fonts, edit bigger documents, and work faster. It's a powerful Extended and Expanded memory manager, capable of performing complex "on-the-fly" memory conversions so you don't have to manually allocate memory and re-boot every time a change is needed. Map ROM into other areas, gaining your computer up to 211K of additional High Memory (compatible with most PCs). Features a simple menuing interface and "what-if" modes to run through hundreds, sometimes thousands of combinations to decide the best memory configuration for your PC. Fully compatible with MS Windows and DOS 5, and is invaluable for increasing performance in a network environment. Includes Manifest, the award-winning diagnostic tool, free with purchase.

List: \$100 Ours: \$65
FAXcetera #: 1970-0002 Return: L

QRAM

Quarterdeck Office Systems

QRAM will load your TSRs, device drivers and DOS resources into High Memory (the area between 640K-1MB). You can save yourself up to 130K of memory. Use Qram's VIDRAM feature for a total savings of over 194K. Requires EMS 4.0, EEMS expanded memory hardware, or Chips and Technologies ShadowRAM (SCAT & NEAT Chip Set). Includes an enhanced, simple interface and support for more PCs. Fully compatible with MS Windows and DOS 5, and is invaluable for increasing performance in a network environment. Includes Manifest, the award-winning diagnostic tool, free with purchase.

List: \$80 Ours: \$49
FAXcetera #: 1970-0003 Return: L

Switch-It 3.2

Better Software Technology, Inc.

A task-switching package that allows users to switch programs (up to 100) to their EMS or hard disk, freeing up RAM space to run large applications. Easy to use! Switch-It offers automatic installation, a customizable menu, a cut & paste feature, complete network compatibility. Uses only 26K of RAM.

List: \$100 Ours: \$90
FAXcetera #: 2396-0001 Return: N

MENU MANAGEMENT

Outside In

Systems Compatibility Corporation

Outside In is a file viewing and importing utility that adds clipboard-style cut and paste to DOS. View DOS files in their original format, without the original software. Select any part or the entire file and insert the data into your current document. Outside In supports more than 60 word processing, spreadsheet and database programs.

List: \$89 Ours: \$81
FAXcetera #: 1001-2003 Return: F

PreCursor 4.1

The Aldridge Company

PreCursor is a sophisticated menu interface system that makes access to any program on the hard disk as easy as pressing a key. Unlimited menu selections, utilities, mouse support, menu cloning, built-in password security. PreCursor is network compatible, includes API support, computer usage reports, user help files and screen blanking.

List: \$99 Ours: \$89
FAXcetera #: 2810-0003 Return: F

Tree86 4.0

The Aldridge Company

A file management tool, sophisticated, yet easy to use. Network compatible. Options accessed with pulldown menus. Directories displayed in a graphic format; files can be sorted in 10 different ways. Tree86 handles 16,000 files in 2,000 subdirectories and even works across drives. Options include xcopy, tag, sort, find files, text search, archive files, kill or move directories. Includes Alt/edit a full-featured, pure ASCII editor.

List: \$90 Ours: \$81
FAXcetera #: 2810-0002 Return: F

MULTIPURPOSE

EasyShare 2.0

Adisoft, Inc.

Agent system that controls PC programs, exchanges data between applications, and combines processes. Ideal for integrating PCs with host systems. Run on top of any program or embed into C and xBase. Works with 3270, 5250, HLLAPI, Unisys, OnLan/PC, asynch, and PC programs. Minimal memory requirements.

List: \$240 Ours: \$215
FAXcetera #: 1004-3001 Return: F

Mace Utilities 1990

Fifth Generation Systems

A set of professional-quality DOS utilities that provides a fast, versatile, easy-to-use method of disk maintenance, data protection and data recovery. Speed up performance, provide complete protection and enable the user to recover from most disk disasters automatically. Features a pulldown menu system with optional user levels to make it easier to use.

List: \$149 Ours: \$134
FAXcetera #: 2490-0001 Return: F

Magellan 2.0

Lotus Development Corporation

Adds a wide range of new tools that let users find information quickly; compress files to free up more hard disk space; recover deleted files; view a wider range of files, including graphics files; and check for possible file corruption due to viruses. In addition, fully customizable, allowing users to rearrange function keys or create additional menus to accommodate their individual needs.

List: \$149 Ours: \$129
FAXcetera #: 4000-0001 Return: L

MKS TOOLKIT 3.2

Mortice Kern Systems

The MKS Toolkit provides the power and flexibility of UNIX on DOS or OS/2. The MKS Toolkit offers an abundance of utility programs which can be linked together through pipes and I/O redirection to perform complex tasks. It contains more than 150 UNIX utilities that track the emerging POSIX/FIPS standard. Includes a 260 page tutorial manual, on-line help pages, 400 pages of technical reference, disk/EMS swapping, reference cards, 16 bit compress, Windows 3.0 support, variable install, raw device support and much, much more. Some of the utilities included are: alias, awk, banner, c, calendar, cat, chdir, chmod, compress, cpio, crypt, dc, diff, ed, find, fmt, glob, grep, head, history, init, KornShell, login, m4, mailx, mkdir, more, rm, spell, tar, uname, uncompress, uuencode, uudecode, vi, wc, and who.

List: \$249 Ours: \$205
FAXcetera #: 1634-0005 Return: F

The Norton Commander 3.0

Symantec

The leading DOS manager integrates file management, file viewers, application launching, PC-to-PC file transfer and E-Mail into one simple and consistent user interface. Swiftly navigate through directories and directory trees; perform DOS operations with one keystroke or mouse click; scan the contents of data files without running the application that created them; and much more.

List: \$149 Ours: \$99
FAXcetera #: 2132-0016 Return: F

The Norton Desktop for DOS™

Symantec Corporation

The Norton Desktop for DOS is the industry's first "drag-and-drop" desktop utility for DOS-based PCs. It combines an easy-to-use, visual interface for DOS with an array of non-technical tools for the everyday user. You can run programs from a menu, print, copy, delete, view, backup and protect all your files with ease. Besides simplifying common daily procedures. Safeguards your PC with data backup, virus protection, file recovery, and hard disk optimization—all done for you automatically with just a few keystrokes or mouse clicks. Even includes colorful animated screen savers to protect your PC when idle.

List: \$179 Ours: \$129
FAXcetera #: 2132-0034 Return: L

The Norton Desktop V2.0 for Windows

Symantec Corporation

The complete file management and utilities solution for every Windows user. It's the only Windows application product that provides seamless, visual integration for faster group and file management, as well as immediate access to programs and data. The Norton Desktop also comes with a comprehensive set of Peter Norton's best utilities. Features include: Full Windows 3.1 compatibility, Norton Anti-Virus protects against over 1,000 different types of viruses, Windows text editor, network install, unlimited drag-and-drop, data recovery and emergency help, faster load time, DOS restore additional tools plus network features, and over 45 file viewers.

List: \$179 Ours: \$127
FAXcetera #: 2132-0027 Return: L

DATA EXCHANGE WITH AGENT... EasyShare 2.0

EasyShare is the perfect "secret" agent to extract and transfer data between programs on your PC. EasyShare is fast and versatile: use it as a standalone or embed it into C or Xbase programs—it will be totally transparent to your users. You can even use EasyShare as an inexpensive front-end for micro-mainframe links. EasyShare passes data from PCs to mainframes with no middleman—saving you untold amounts of time and money.

If you're building an application that needs to fetch and carry data from one source to another, or if you need to access information in other programs from your own PC, you need an agent to do your dirty work.

Try EasyShare risk-free for 30- days. If you aren't saving lots of time and money by then, return it at no cost. No questions asked. Order EasyShare 2.0 today.

System Requirements:

DOS 3.0 or higher and at least 27K of free RAM. Can be loaded into high memory with DOS 5.0, QEMM or similar utility. Will run inside a DOS window in either Windows or OS/2 and supports most mainframe emulators.

Adisoft

Adisoft, Inc.
664 Joaquin Ave.
PO Box 2094
San Leandro, CA 94577
Phone: (510) 483-5605
FAX: (510) 483-7504

8 0 0 - 4 4 5 - 7 8 9 9

CALL
800-445-7899

Norton Utilities 6.0

Symantec

The Norton Utilities 6.0, the award-winning standard for data recovery and protection, helps you safely recover more lost data than any other program. Version 6.0 is fully compatible with DOS 5.0 including DOS 5.0's new memory manager and Task Switcher. Speed up your hard disk with a faster Norton Cache and a four times faster Speed Disk. Includes NDOS, the ultimate DOS enhancer, for essential DOS improvements while reducing the amount of memory DOS requires. The Norton Utilities fully supports networks and Windows.

List: \$179 Ours: \$115
FAXcetera #: 2132-0017 Return: F

Outside In for Windows

Systems Compatibility Corp.

Outside In for Windows is a file viewing and data import utility. Use it to copy data from 90 word processing, database and spreadsheet formats to the Clipboard with formatting intact. It also prints files and launches applications. Use it as a stand-alone utility or as part of Norton Desktop, Windows 3.1 or the major word processors. Outside In supports DOS, Windows and Macintosh files.

List: \$89 Ours: \$81
FAXcetera #: 1001-2001 Return: L

PC Tools™ Deluxe 7.1

Central Point Software

A powerful but easy-to-use collection of data recovery, hard-disk backup, DOS shell, and desktop management programs. Includes the DiskFix disk repair program, more than 30 file viewers for popular applications, optional write caching, and support for a wide variety of tape-backup systems. Runs on IBM PCs and 100% compatibles with DOS 3.0 or higher and 512K of memory.

List: \$179 Ours: \$129
FAXcetera #: 1529-0007 Return: F

View-It 1.4

V Communications, Inc.

View-It is a zoomable high speed file viewer, capable of display up to 160 columns and over 100 lines depending on your EGA/VGA equipment. It accepts files of any size. View-It provides advanced fast searching, with wildcard support, and multi-file searches. Includes graphic scroll bar and mouse support. Written entirely in assembly for very fast performance.

List: \$70 Ours: \$65
FAXcetera #: 1828-0004 Return: F

NETWORKING

ARCmonitor+ & Emonitor+

The complete software diagnostic tools that troubleshoot errors, hardware failures, and traffic overloads on your ARCnet or Ethernet LAN. Determine if your network is overloaded by viewing the packets/sec being transmitted on an easy to read graphic screen. Check the integrity of your network cable to verify network connections. View bandwidth utilization to see how network capacity is being used. Asynchronous communication features allow you to do all your LAN troubleshooting via modem from anywhere.

ARCmonitor+ List: \$295 Ours: \$235
Emonitor+ List: \$295 Ours: \$235
FAXcetera #: 2938-0005 Return: L

DISTINCT TCP/IP for Windows-Software Development Kit

Distinct Corporation

DISTINCT TCP/IP for Windows-Software Development Kit extends TCP/IP networking capabilities to Microsoft Windows. Windows developers can write TCP/IP network applications, or distributed applications using RPC/XDR such as a front end to a UNIX database. It includes three APIs: Berkeley Sockets, Remote Procedure CALL (RPC) and Network Windows (NFS Client). All are provided as VERY SMALL DLLs that run in all three Windows modes. Coexists on the same board with LAN Manager (NDIS) or Novell (packets).

List: \$495 Ours: \$446
FAXcetera #: 2994-0002 Return: N

DISTINCT TCP/IP for Windows-Network Applications 2.2

Distinct Corporation

DISTINCT TCP/IP Network Applications give you TCP/IP connectivity without consuming your DOS memory. Multiple concurrent Telnet sessions, drag and drop file transfer (FTP) and more. You can even drop remote files onto a local printer! Ping and other utilities included. Optional Developers toolkit for TCP/IP, RPC, Telnet, FTP and NFS available.

List: CALL Ours: CALL
FAXcetera #: 2994-0003 Return: N

LAN Automatic Inventory

Brightwork Development

A complete configuration system that automatically creates a LAN equipment database including both hardware configuration and software application information for workstations and file servers. It detects over 1700 software titles on local and network hard drives and identifies specific software versions. Keeps track of number of copies of each software package and allows users to customize additional software titles. Supports consolidation of data from multiple servers and sites. Brightwork's LAN Automatic Inventory is the only network-based solution that supports both PC and MAC hardware and software products.

List: \$695 Ours: \$455
FAXcetera #: 2938-0006 Return: L

LAN Support Center

Brightwork Development

Brightwork's practical "help desk" software is a real-time maintenance and alerting system for LAN managers. LAN Support Center gives you instant access to user and hardware information, making it easier to answer support calls quickly and effectively. Easily track your support efforts with relational databases that combine equipment records, user records, alerts and trouble tickets. Customizable checklists allow you to set procedures. Server Watch feature, available 1st quarter '92, monitors critical file server activity and alerts you to significant changes.

List: \$595 Ours: \$389
FAXcetera #: 2938-0007 Return: L

NETremote+

Brightwork Development

NETremote+, Info World's top-rated LAN Communications product, is the indispensable support software that lets you see user's screens on your screen and control their PCs with your keyboard. NETremote+ provides superior diagnostic capabilities, so you can check on server connections, LAN adapter and IPX

statistics, programs in memory and other vital data. Provides both dial-in and on-LAN PC control. The most comprehensive remote access and support software available. Full windows 3.0 implementation will be available 1st quarter '92.

List: \$350 Ours: \$229
FAXcetera #: 2938-0001 Return: L

PS-Print

Brightwork Development

With PS-Print, PC Week's top-rated LAN printing solution, all your users can have easy access to all the printers on your LAN—wherever they're located. This complete LAN printing system dramatically improves printing speed on NetWare and simplifies printing access. Prints graphics more than 10 times faster than NetWare RPrinter. PS-Print includes QueueIT!, a pop-up printer selection menu that lets users choose printers without exiting their programs. Takes full advantage of the high-speed performance and benefits of HP LaserJet III series printers.

List: \$395 Ours: \$259
FAXcetera #: 2938-0003 Return: L

SiteLock

Brightwork Development

SiteLock provides software license metering, virus protection and software execution control for NetWare LANs. Limits concurrent use of software to ensure compliance with license agreements. Locks users out when all legal copies of software are in use. Verifies protected files before allowing execution by performing bit-by-bit check against a registered copy of the file. Prevents altered, unauthorized or possible infected software from running. Fully compatible with Microsoft Windows 3.0.

List: \$495 Ours: \$325
FAXcetera #: 2938-0004 Return: L

OPTIMIZING

Cache86 4.0

The Aldridge Company

Cache86 is the fastest, safest, most memory efficient disk cache program. Increase productivity - Cache86 speeds up data transfer. Write back and write through are available at the user's option. In expanded memory, a 4 meg cache can use as little as 1K of conventional memory. Includes benchmark program to measure system performance and memory map utility.

List: \$50 Ours: \$45
FAXcetera #: 2810-0001 Return: F

NetOptimizer 2 V1.00

Ontrack Computer Systems, Inc.

NetOptimizer software is the premier file server organizer, designed to reduce access time, increase productivity, and aid data recoverability. NetOptimizer software will defragment files, arrange them into zones, and guard your valuable network data while reorganizing.

List: \$395 Ours: \$356
FAXcetera #: 0850-0007 Return: F

NOW!

TeraTech

Accelerates reading from and writing to hard disks and diskettes, adding life to hard drives and diskettes; makes the most of extended, XMS or expanded (LIM/XMS) memory by eliminating redundant disk activity, and can be adapted to any special need.

List: \$89 Ours: \$80
FAXcetera #: 1972-0013 Return: F

SCREEN SAVERS

After Dark for Windows

Berkeley Systems

Save your screen with over 40 incredible displays—2.0 features 5 Brand New Displays, Digital Sound, True Color Graphics, WallZapper (instantly turns an After Dark display into Wallpaper), Network Password Support, new fish, and MultiModule! Also DIS blanking to black and password protection.

List: \$50 Ours: \$28
FAXcetera #: 3025-0001 Return: F

More After Dark

Berkeley Systems

Offers more than 25 add-on displays for After Dark. Including Mowin' Man, Tunnel and Graphstat. Virex-D virus detector module from Microcom, maker of Virex, scans for viruses while After Dark sleeps. Lunatic Fringe game module. Beautiful new Fish! to restock your fish tank.

List: \$40 Ours: \$28
FAXcetera #: 3025-0002 Return: F

SECURITY

Data Security Plus

PC Guardian

Data Security Plus is a comprehensive security software package offering data protection and anti-virus prevention, detection and removal capabilities. It is comprised of six modules, each offering different security features. Choose from the following to create a security system to meet your specific needs: Access control (required), program approval and automatic virus scanning, directory locking, audit trail, DES Encryption, and forced backup.

List: CALL Ours: CALL
FAXcetera #: 2333-0001 Return: N

Dolphin Encrypt 1.60

Dolphin Software

Dolphin Encrypt encrypts and decrypts files and floppy disks using an 8-60 character key. It can encrypt multiple files specified via wildcard characters and size or type of file. Files are compressed during encryption, output can be binary or text. Can be run from a batch file. Encryption is fast and highly secure, with output indistinguishable from random bytes.

List: \$195 Ours: \$176
FAXcetera #: 3019-0003 Return: L

HardLock Computer Security

Sentry Software Corp.

HardLock 3.0 Computer Security secures your computer from intruder and unauthorized personnel access, plus provides access restriction for up to 5 authorized users. Restrictions include supervisor-defined limited access to serial ports, printer ports, floppy drives and hard drives. In addition, HardLock is the only computer security that has built-in boot virus protection. It also has a variety of other beneficial features.

List: \$49 Ours: \$41
FAXcetera #: 1004-8101 Return: F

**For FAXcetera®
instructions
See page 176**

SAFE AND SECURE.

It's what we all want to be. And you do your best to make sure that your family, your home and other valuable possessions are indeed safe and secure.

But what about your computer? And the valuable information that you keep in it? Truth is, just about anyone can have access to it if your computer is not secured by **HARDLOCK**.

In fact, studies show that even in the most secure offices unsecured computers are still vulnerable to intruders. People such as cleaning personnel, mailroom clerks and others still have easy access to your computer, even if it has a key lock or power-on password.

Pull the Plug on Unauthorized Access

Now you can put a stop to all intrusions and unauthorized access by securing your computer with **HARDLOCK 3.0**, the computer security of choice by Fortune 100 companies and the U.S. Government.

No clumsy hardware to install. No complicated procedures to follow. And absolutely no danger of losing valuable programs or files. Just install using the simple installation utility provided, select your password, and you're on your way.

Sophisticated, yet Simple to Use

HARDLOCK automatically maintains continuous security for you, so all you have to do is turn off the computer when you're finished. And when you go to use it again, just enter your password when the computer boots. It's that simple!

In addition, **HARDLOCK** is the only security package that protects your computer from dangerous boot viruses. **HARDLOCK** detects and disinfects all boot viruses with deadly accuracy, guaranteeing that your computer boots up 100% boot virus free.

**BOOT
VIRUS**

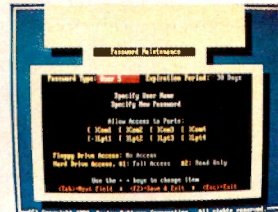
- Windows 3.1 Compatible
- DOS 5.0 and Below
- GTDR Approved Software



"Providers of the Finest in Computer Security"

Multi-Level Security without the Anguish

With **HARDLOCK** you can configure up to five additional user passwords with access restrictions to the serial ports, printer ports, floppy drives and hard drives. All with just a few clicks of the mouse, or strokes on the keyboard.



HARDLOCK will also lock the keyboard and activate a screen saver for you when you step away. Or if you prefer, just press a quick hot-key sequence to secure

instantly. And when you return, simply enter your password to pick up where you left off.

And as an added feature, you can scan the history of various security events simply by viewing the built-in audit trail. It keeps track and records important information such as password changes, user log-ins, and much more. Even the auditors will smile!

Proven Track Record of Safety and Reliability

Since its first introduction in 1988, **HARDLOCK** has never caused any damage to or loss of programs or files, making it the safest computer security product on the market.

And unlike other security packages where security can be breached, **HARDLOCK** has withstood even the most valiant attacks without ever being defeated.

So whether you're a developer, an end user, or a traveling salesperson, you'll enjoy peace of mind knowing that your computer is safe and secure with **HARDLOCK**. Order now, and take advantage of our 30-Day Money Back Guarantee. And for only \$49.00, you can't lose!

- Uses Less Than 16k
- Network Compatible
- Transparent Operation

Introducing **HARDLOCK™ 3.0** Computer Security with Virus Protection

To Order, Call

1-800-445-7899†

HARDLOCK. The Choice of Professionals.

SENTRY SOFTWARE CORPORATION

637 West Wagner Court
Gilbert, Arizona 85234
1-800-279-LOCK

Customer Service: 1-602-821-9294
Fax: 1-602-491-1383

UTILITIES SOFTWARE

Rescue

AllMicro

The only program that can recover data from PHYSICALLY DAMAGED floppies and hard drives. Goes way beyond the limitations of other utility programs. Bypasses DOS's inability to read bad disks and moves the drive heads directly. It will even read a floppy with a hole poked through it. It will read disks and drives that NORTON UTILITIES™ can't. Menu-operated, on line help, easy and safe to use. Browse manually or search automatically and mark, save and/or print your data in it's original format. Save hundreds, even thousands of dollars by doing your own data recovery.

List: \$299 Ours: \$199
FAXcetera #: 1005-0501 Return: L

FAX

FactslinkPro

Voicelink, Inc

A complete interactive voice response program that includes voice mail, fax retrieval, fax mail, auto attendant, Voice response and the ability to read numbers and dates from a database. The package comes with several completed applications and a screen based application generator that doesn't generate computer code. FactslinkPRO is very feature rich and allows you to make unlimited runtimes! The package allows you to have up to 48 voice lines and up to 16 fax lines per system and uses state of the art fax and voice boards.

List: \$895 Ours: \$809
FAXcetera #: 1004-5001 Return: L

FaxRight

Management Information Sciences

FaxRight for Windows allows end users to send faxes directly from any Windows

Application, as well as receive faxes in the background, schedule fax transmissions, export fax images and view and print faxes. The program uses integrated, dBASE compatible phone books. Supported fax modems are EIA TR-29.3 Class II and EIA 578 Class I standards, as well as many fax modems that use Sierra SendFax protocol.

List: \$149 Ours: \$129
FAXcetera #: 1000-6501 Return: L

SuperFax for Windows 5.0

Pacific Image Communications, Inc.

A fax communications software that supports EIA Class 2 and CAS boards. Together with these fax boards, the software allows users to fax directly from their Windows applications. Has DDE capability that lets users establish direct communication between their application and SuperFax. Available in single user and network version.

List: \$99 Ours: \$89
FAXcetera #: 7999-0001 Return: F

VFax

Data Dispatch Corporation

VFax is a two-board, single-line, Fax-on-Demand kit that runs on PC-AT and most PC-XT compatible computers. VFax provides unattended distribution of literature by document number via fax machine. The caller responds to simple voice messages with touch-tone responses. Features include: one-call and call-back document delivery methods, security codes, user account control, detailed reports, remote document entry and deletion, and more. VFax installs in 30 minutes.

List: \$995 Ours: \$899
FAXcetera #: 1005-0501 Return: F

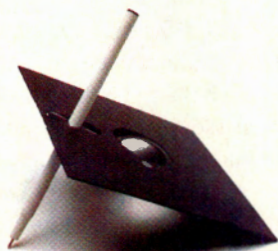
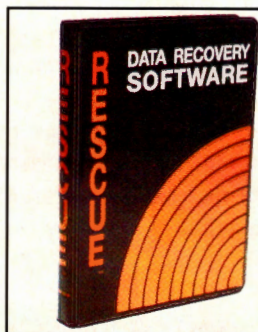
Voice/Fax Application Generator One to 48 Phone Ports Per System Highest (64KB/Sec) Voice Quality

- Fax Retrieval
- Voice Mail/Auto Attendant
- Interactive Voice Response
- Menu/Windows Driven
- Programming/DLL interface
- Unlimited Runtimes to 4 ports

Listed in Inbound/Outbound magazine's product of the year section in 1991.

Voicelink Inc.
1840 Oak Ave.
Evanston, IL 60201

**Complete Demo,
Call Today!**
708-866-0404



RECOVER DATA FROM PHYSICALLY DAMAGED DISKS & DRIVES!

"I've never seen anything like this... I was horrified when Norton™ was unable to recover 3 years worth of my research work... **RESCUE™** did exactly what you said it would... It's priceless" **R.G., VP Research/TTI**

Norton Utilities™ and PC Tools™ cannot recover your data if DOS is unable to read the disk. If a disk returns "GENERAL FAILURE READING DRIVE (X)," **RESCUE™** will read it anyway! **RESCUE™** bypasses DOS's inability to read physically damaged disks and moves the drive heads directly! **RESCUE™** is your first line of defense when it comes to recovering your valuable data. Save hundreds, even thousands, of dollars by doing your own data recovery!*

RESCUE™ can perform miracles!

**To Order Call
Programmer's Paradise
1-800-445-7899**

AllMicro, Inc.

PP9

*Note: Some failures may be beyond RESCUE's™ ability to recover data.

VFax™

Fax-on-Demand

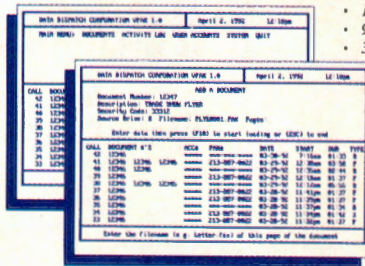
VFax is a low-cost single-line Fax-on-Demand system for IBM PC and compatible computers. VFax is fully automated and provides 24-hour unattended customer service to callers requesting printed materials. Users dial in from a faxphone, enter touch-tones in response to simple voice messages and receive the information they need on the same call. Or, VFax will call their fax machine and deliver the requested information.

VFax offers fast installation and simple menu driven operation.



VFax features include:

- Remote document loading and deleting
- Security code protection
- Remote security code editing
- Account number restrictions
- 1000 document capacity
- 99 pages per document
- 3 document requests per call
 - 200 account numbers
 - 3 access levels per account number
- Voice number recording
- Detailed activity log
- Cover page transmission
- Dialing prefixes
- Reports
- High or low resolution documents
- 9600 bps transmission



Data Dispatch Corporation, P.O. Box 985, 2000 Madison Avenue, Montebello, California 90640. Tel: (213) 724-9832 Fax: (213) 887-0022
Call for a Demo at (213) 887-0022 and request document R12345.

VFax is a trademark of Data Dispatch Corporation. IBM PC is a trademark of International Business Machines Corporation. Specifications are subject to change without notice. Printed on the U.S.A.
(c) 1992 Data Dispatch Corporation. All rights reserved.

Index

Symbols

.RTLink	27	122
.RTLink/Plus	27	122
.RTPATCH	60	
/*resident_C*/4.5	22	84
1 DIR Plus	60	
286 SDK	32	
286 Overlay Series	34	122
286DOS-Extender SDK		113
3-in-1 for C	20	
386 DEBUG	20	
386 Dev. Performance Pak	20	
386 LinkLoc	20	
386 MATLAB™		158
386 Overlay Series	34	122
386/VMM	20	166
386/ASM/LinkLoc	20	115
386DOS-Extender™	20	75
386MAX	60	166
4 Sight	22	

A

ABC Flowchart	50	144
Above DISC +	60	166
Above Mem	60	166
AccSys for dBASE	20	
AccuSoft Image Format Lib	57	
AceFile	50	160
Act!	57	
Act! for Windows	58	
Actor	52	
Actor Professional	52	150
Ada Training Environment	20	
Ada Graphics	20	76
ADComm	27	
Adobe Illustrator for Win	58	
Adobe Streamline	58	
Adobe Type Manager	58	
ADS Diagrammer	50	
Advanced C	63	
ADVANTAGE Disassembler	20	76
After Dark	60	
After Dark for Windows	63	168
Agenda	57	
Agility/VB	20	138
Aldus Freehand	58	
all CLEAR	32	111
AllType	60	
Alpha RPL	34	
Ami Pro	58	161
Analysis Manager	24	96
AntiVirus	60	
API Toolkit	22	
API Toolkit for Basic	20	
API Toolkit for C	22	
API Toolkit for Pascal	34	
APL* Plus PC	34	
APGEE 4GL/DBMS	66	
Applause II	57	
ARAGO dBLX	27	101
ARCmonitor+ & Emonitor+		168
Artful Library	27	
Artful Two	27	
Artline	54	
askSam	57	
ASM Checker	20	77
ASM Pro Pak III	20	
ASMFLOW Professional	20	
ASMTTool	20	

Asymetric TIBk Multimedia	49	
Async Professional	34	124
ASYNCH PLUS	34	124
AT BiosKit	22	88
Auto-Intelligence	32	116
AutoCAD	54	
Autoclass Barcode	20	
AutoDesk 3-D Studio	54	
AutoDesk Animator Pro	54	
AutoRun	63	
AutoSketch	54	
AUTOSORT	34	126

B

B-Tree Filer		124
Baby Driver	22	84
Back-It	60	
Baler	57	
Balyze	27	109
Bar Code Library	20	77
BAR-ONE	20	
BAS_C Commercial	20	
BAS_C Economy	20	
BASIC Network Library	20	
Bcheck	27	109
Bcreate	27	109
BeckerTools for Windows	63	
Bedit	27	109
Best Choice3	32	116
Beyond.Bat	60	
BLAST II	66	
BLAST Pro	54	
Blinker	27	122
BlueMAX 6.0	60	166
Bookmark Plus	60	
Boot Commander	60	166
BOOTCON	60	
Borland C++	20	93
Guide to Graphics	63	
Brainmaker		116
BreakOut II	20	82
BRIEF	27	113
Brooklyn Bridge	54	
Brun	27	109
BTree/ISAM	22	
Btrieve	20	82
Blackboxes for Layout	20	
for Windows	49	142
Budget Express	57	
Business Graphs Blackboxes	20	
BUtility	20	
Button Tool	50	

C

C Asynch Manager	20	82
C Comm Tlkt Professional	20	
C Comm Toolkit	20	82
C Comm Toolkit/Windows		142
C Comm Tlkt/Ext DOS		75
C Data Manager	22	83
C Data Manager for Win	49	
"C" EMM Library 1.00	22	86
C Library for Btrieve	22	
C Programmer's Toolbox	20	112
C Shroud	22	
C TOOLS PLUS	22	84
C Utility Library	22	84
C Windows Toolkit	20	
C++/Views	47	96
C-CALL	20	111
C-Clearly	20	111
C-CMT	20	112
C-Cover	20	
C-DOC	20	111
C-GRAPHICS	84	
C-Heap	22	

C-Index/PC for MS/C	22	
C-Index/PLUS	22	
C-ISAM	66	
C-LIST	20	112
C-METRIC	20	112
C-REF	20	112
C-scape 3.2c for UNIX	66	
C-Scape 386 w/Look & Feel	20	75
C-Scape with Look & Feel	22	88
C-terp (MS-DOS)	20	80
c-tree Plus	22	83
C-Vision	22	90
C-Worthy User Interface		88
C/ANALYST	20	
C7toPROM	22	
CA-Realia CICS	24	
CA-Realia COBOL	24	
CA-Realia MENU	24	
CA-SuperCalc	57	
CA-SuperProject for Win	57	
Cache86	60	168
CAD/CAM Dev. Kit	20	80
CALC (DB)	27	99
Carbon Copy Plus	54	155
CARETS & CURSORS	52	150
CASE:W Corporate Ed.	49	141
Casual.lib	27	99
CBTREE	22	
Central Point Anti-Virus	60	
Central Point Backup	60	
Certus	63	
Charisma	57	
ChartBuilder for Visual Basic		140
ChartBuilder.OBJ		104
CHARTIST-2		144
CheckIt	60	
CheckIt Floppy Drive Testing	60	
Cheetah	27	113
ChiWriter	57	
CI C++	66	
Clarion LEM Maker	27	109
Clarion	27	102
CLEAR for C	20	113
CLEAR for dBASE	27	104
ClearView-386/486	32	
Clipboard Electronic Mail	54	155
Clipper	27	102
CLIPWKS	27	109
ClipWord/SpellClip	27	99
Close-Up Customer	54	
Close-Up Dual Pack	54	
Close-Up for Win & DOS	58	
Co/Session	54	
COBOL/2	66	
codan	20	126
Code Base 4 for UNIX	66	
Code Base	22	83
Code Craft	32	113
Code Translator	34	128
CodeCheck	20	127
CodePad Editor	50	
CodeScreens	22	
CodeTranslator		128
CodeWatch	32	110
CodeWright	50	
ColRTrax	27	104
Comm BLOK Library	20	
Comm Tools	27	
Command Line	47	
Command Plus	60	
Common-Link	60	164
CommTools	27	101
Control Palette	49	142
Convert Toolkit	20	
Copy II PC	60	
CoreFast	60	
Corel Draw!	58	161
Corporate Vision	50	
CoTerm	54	
CPU Monitor	47	

Cross-16 Meta-Assembler	115	
Crosstalk Communicator	54	
Crosstalk for Windows	58	160
Crosstalk MK IV	54	155
Crosstalk XVI	54	
CrystalComm	49	
CSL - C Sci. Programming	22	
CSL - Sparse Matrix Package	22	
CSource	20	
CSS/Graphics	57	
CSS:Statistica	57	
CtrlGauss	57	156
Cubit	60	
CUPL	57	158

D

DADISP	54	
Dan Bricklin's Demo II	34	124
Dan Bricklin's Page Garden	60	
dANALYST GOLD	20	81
Data Entry	34	119
Data Junction	34	128
Data Security Plus	60	168
Data Transfer Utility	27	109
Database Graphics Tlkt	27	104
Database Toolkit	32	
Database/Supervisor	27	
DATABasic	20	78
DataBoss	20	102
DataBoss -Pascal Version	27	
DataBoss Xbase Engine	27	90
DataEase	27	
Datalens	54	
DataLib/Windows	49	
Datashuttle	34	
DataTable	50	94
Dazzle/VB Professional	49	140
DB-FABS & DABL	20	
db/LIB Database Library	20	78
db/LIB Network DB Platform	20	78
db_FILE	66	
DBAPrep	22	141
dBASE Blackboxes	20	
dBASE III Plus	27	
dBASE IV	27	102
dbFAST Windows	50	143
dbFind	27	
dbPower	27	
dbUG	27	
DBXL	27	
DbxSHIELD	50	148
DbxSHIELD(OS/2)	47	148
DC/CAD	57	160
DCACHE	60	
dCLIP	27	
ddb	164	
DDF Builder	22	
ddMap	27	106
DEBUG*2000	66	
DemoSHIELD (OS/2)	47	
DeMystifiers	52	150
DERIVE	57	
Design CAD	54	
Design SYM	54	
Design/Windows	50	146
Designer	58	161
Designer QuickWindows	20	79
Desklint	54	
DESQview, 386	52	153
DESQview API C	22	
DESQview API Clipper	27	
DESQview API Debug	32	
DESQview API Pascal Lib	34	
DESQview Companion	52	
Dvlpng Win Apps w/Borland C++		63
Developing Win Apps w/SDK63		
Development ToolsKan Set	52	
dGE	22	104
dGE Font Library	22	104

dGE Icon Library	22	104
DGN/CAPTURE	54	
dGT	27	104
Dialog System	66	
DialogCoder	49	141
Direct Access	60	
Direct Access Windows	63	
DIS DOC	20	
Disk Manager	60	
Disk Manager PS2	60	
Disk Optimizer	60	
Disk Technician Gold	60	
Disk Vision	60	
DiskDupe, Prof.	60	162
Diskette Manager 3	60	
Disklock PC	60	
Distinct Backup for Windows	63	
Distinct TCP/IP Dev. Kit	54	168
Distinct TCP/IP for Windows	52	150
Distinct TCP/IP Net. Appl.		168
DOCMaker	32	113
Documenter	27	104
DOCUMENT'er & DIAGRAM'er		32
Dolphin C Toolkit	22	84
Dolphin Encrypt	60	168
Don Malin's XREF	20	80
DOS Programmer's Ref	63	
DosUtils	60	
DoubleDisk	60	
DoubleDOS	60	
dQUERY	27	
dQuery		106
DR DOS	52	153
Dr. HALO IV	54	156
Dr. Solomons Anti-Virus Tlkt	60	
Dr. Switch	60	166
Dr. Switch-ASE Devel. Pak	60	
Drafix	54	
Dragnet	60	
DrawPerfect	54	
Drover's ToolBox		150
DS Optimizer	60	
DS Squeeze	60	
dSalvage	27	109
Duet	60	
Duplicator Toolkit Pro	60	
dVoice	27	
DVT: Data Visualization Tool		109
DWG/CAPTURE	54	
DynaComm Asynch	54	160
Dynamic Data Dictionary	27	99
Dynamic Memory Control	60	
DynamicObject C/C++		94

E

E-Mail/C	32	118
E-Mail/G Windows/New Wave cc:Mail/MS Mail		50
E-MEM	22	86
EASISwap		166
EasyCASE	24	96
EasyFlow	27	113
EasyShare	60	167
EEEditor	32	
ED for DOS	27	113
for Windows	50	146
EDIT*2000	66	
EditPro	50	
EDIX	32	
EDIX (286)	66	113
EDIX (386)	66	113
EDIX for DOS & OS/2	32	
EDT+	66	
EGA/VGA Color Extension	34	
EMACS	32	
Embark Professional	60	
Empty Shell	22	

Solid B+ Toolbox	34	TE Developer Kit	32	Turbo Translator	34	Writer	57
Solid Link	20	TECH*GRAPH*PAD	57	Turbo Vision Dvlpmnt Tlkt	34	Whitewater Resource Tlkt	52
Solid Windows	34	Telecomm Toolkit	20	TurboMAGIC	34	Who-What-When	57
Sortex	34	Telepathy	27			Wide Angle	63
SOS Help!	27	TEMPRA GIF	57			Win++	49
Source Print Deluxe	20	TEMPRA PRO	57			Win-Link	52
Source_Manager	34	TEMPRA SHOW	57			Window Editor	22
SOURCEDOC	34	TEMPRA TURBO CHARGER	57			Windows Draw	58
SourceLink	47	Terminal Plus for Windows	54			Windows Help Magician	50
Sourcer	20	TERRANOVA for DOS	54			Windows NT Switch-It™ Code	142
w/BIDS Pre-Processor	20	TERRANOVA w/ PBX	156			Generation Module	142
Sourcerer's Apprentice	34	TERRANOVA Ntwk. Version	54			Windows System Library	34
for Windows	52	TERRANOVA/Windows	58			Windows Teach	52
SourceSafe	34	TesSeRact Compression Sys	22			Windows Workstation	52
Speed Edit for Windows	32	CXL User Interface	22			WindowsGENERATOR	141
SpeedStor	60	Developer's Workshop	22			WindowsMAKER	20
SpellCode	20	File Management System	22			WindowsMaker Professional	20
SPF/2	32	Printer Control System	22			for 32-bit code	49
SPF/PC	32	Programmer's Power Pak	22			for 32-bit code: WATCOM	75
Spinriker PLUS	47	Ram Res. Dev. Sys.	22			for Watcom C/386	20
Spinner Plus/Windows	52	TG-2D	20			WindowsTeach	52
SpinRite II	60	TG-3D	20			WinGen	49
Spontaneous Assembly	20	TG-Professional	20			Wingz for Windows	58
for C/C++	24	TG-Utilities	20			WinMem	52
Sprint	57	TGRAF	54			WinPro PM	47
SPSS/PC & Advanced Stats	57	The C Shroud™	22			WinSleuth Professional	63
SPSS/PC+ Base SPSS	57	The FairCom SQL Server	22			wINSTALL	165
SPSS/PC+ Data Entry	57	The FairCom® Server	22			WNDX GUI Toolbox	52
SPSS/PC+ Graphics	57	The Norton Commander	60			Word Finder	57
SPSS/PC+ Stats Model	57	The Norton Desktop/Win	60			Word for Windows	161
SPSS/PC+ Tables	57	The Norton Editor	32			WORD FOR WORD	57
SPSS/PC+ Trends	57	The Stork	60			WordPerfect	57
SQA: Manager for DOS	34	The ToolBook	49			WordPerfect for OS/2	58
SQA: Manager for UNIX	66	The Windows Help Magician	52			WordPerfect for Windows	58
SQA: Manager for Windows	52	The Writer's Toolkit	57			WordPerfect Office	57
SQA:Replay	47	Thompson AWK Compiler	34			WordStar 2000+	57
SQA:Robdt	52	Thompson Toolkit & AWK	47			WordStar for Windows	58
SQA:Robot for OS/2	47	TICS Realtime Multitasking				World of C++	34
SQUISH PLUS	60	Kernel	22			World of Object Windows	34
SQZ!	60	TIER	24			World of Objects	34
Stacker	60	TIFF SDK for Windows	50			World of ObjectVision	34
Statgraphics	57	TimeLine	57			Writer's Toolkit DOS	57
Statistics I & II	57	TimeLine/Windows	58			Wylbur/AT	115
Stay-Flex Plus	20	TimeSlicer	22				
Style	24	TKISolver Plus	57				
SUNSCAN Digital Scanware	57	TLIB	34				
SUNSHOW Adv Image Tlkt	27	TNET	15				
SUNSHOW "C" Lang. Lib	22	Tom Rettig's HELP	34				
SUNSHOW Database	27	Toolbook for OS/2	49				
SUNSHOW Image Converter	27	Toolbook for Windows	141				
Super Malloc	22	Tools.h++	24				
Super PC-Kwik	60	ToolsKan:					
Superbase	50	3-D Chart	52				
SuperFax for Windows	58	Bundle 1	152				
Surfer	57	Bundle 2	152				
SVS BASIC-Plus	66	Complete Set	152				
SVS C	66	Field Validation	52				
SVS C3/FORTRAN-77	32	Ribbon/Icon Bar	52				
SVS C3/Pascal	34	Status Bar	52				
SVS DBG	66	Table	52				
Switch-It	60	Toolbox	52				
Sygraph	57	Topáz & Topaz LAN	34				
Systat w/Sygraph	57	TopSpeed C	20				
System Sleuth Pro Analyzer	60	TopSpeed C for OS/2	47				
		TopSpeed C++	24				
		TopSpeed Modula 2	34				
		TopSpeed Pascal	34				
		TOTALWORD	57				
		Tour de IRPRO	34				
		TRAPPER	32				
		Tree86	60				
		True BASIC	20				
		TSRific	22				
		Turbo Analyst	34				
		Turbo C TOOLS	22				
		Turbo C++	24				
		Turbo C++ for Windows	49				
		Turbo Debugger & Tools	20				
		Turbo Pascal	34				
		Turbo Pascal for Windows	52				

U

UI 2 Developer's Release	27	104
UI 2 Touch and Go	27	104
Unpacker	20	77
Untouchable Network	60	
Upgrading to Microsoft Win	34	161
Upgrading to MS DOS 5	34	161
UpShot	34	126
Using Microsoft Windows	63	
Using MS DOS 5	63	
Using Norton Utilities	63	
Using Turbo Pascal	63	

V

VB Comm Library	49	
VB Muscle	49	
VB Tools	49	
VB XREF	49	
VBLite	49	140
VBPX	49	140
Vcache	60	
VCL	66	
VCScreen	22	90
VEDIT	32	115
Ventura Publisher	58	
Vermont Views	22	
Vermont Views & Designer	66	90
Vermont Views Designer	66	
Vern Six's Clipper Toolbox	27	101
Designer/Translator	27	104
VFAX	54	170
Vfeature Deluxe	60	
VI Plus	66	
Victor Image Processing Lib	22	86
View 232	20	82
View It	60	168
View.h++	96	
Virex-PC	60	
Virt-Win	22	86
Virus Prevention Plus	60	
VirusCure Plus	60	
Visible Computer	20	
VistaCOM for Windows	52	
Visual Interface	49	101
Visual Librarian	49	80
Visual SQL	52	142
Visual/db	49	140
Vitamin C	22	90
VM/386	52	
VMData	34	
VMData for Windows	50	
Volkswriter 4	57	
Vopt	60	
Vsearch for Brief	32	
Vtools	60	

W

W LINK	60	
Waite Group's C Programming		
Using Turbo C++	63	
Waite Group's MS DOS Bible	63	
Turbo C++ Bible	63	
WatchDog	60	
WATCOM C /386 9.0	20	75
FORTRAN 77 /386 9.0	20	76
SQL Developer's Edition	27	102
SQL Network Server Edit	27	104
WATFILE/Plus	32	
WATFOR-77	32	118
Webster New World		
Pro Speller	57	
Pro Thesaurus	57	

X

X-32VM	32	113
X-32VM for Zortech C++	32	
XDASM Cross-Disassembler	115	
XENOCOPY-PC	60	
XMEM	60	
XQL	20	83
Xshell	66	
Xsupport	27	109
XT BiosKit	22	
XTree Gold	60	
Xtrieve PLUS	20	83
XVision	54	
XVision for Windows	52	
XVT for UNIX 386	66	
XyWrite III Plus	57	

Z

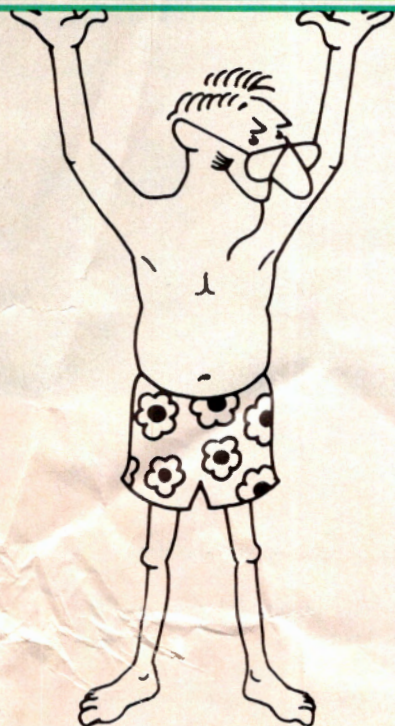
Z Basic	20	
zApp for DOS and Windows	24	96
zApp for OS/2	131	
Zinc Interface Library	24	96
ZipCode/Clip 2.0	27	101
Zortech C++	20	93
Zortech C++ UNIX 386	66	
Zortech C++ with Video	20	
ZyINDEX	57	
ZyINDEX for Windows	58	

T

T-BASE	27	106
Tango Auto Route	54	
Tango CAD Pack Series	54	
Tango Schematic	54	
Targa SDK for Windows	50	
TbxSHIELD	47	152
TCXL	22	
TCXL-OS/2	47	
TCXL-UNIX	66	
TCXL/Editor	22	
TCXL/Graphics	22	
TCXL/Objects	22	

ADVERTISERS INDEX

Ace Software	58	Conquest Data Systems	108	Kansmen Tech	152	Pioneer Software	139
Adisoft	167	Creative Programming	90	Kedwell Software	4	PocketSoft	17
Aetech	76	Database Technologies	82	Kilowatt Software	152	Qualitas	166
Aldridge Company	60	Data Dispatch	170	Knowledge Dynamics Corp.	165	Quarterdeck	53
AlIIMicro	170	Datastorm Technologies	161	Landmark Supersoft	163	RFF Electronics	144
American Cybernetics	114	DCA	55	LEAD Technologies	120	Rogue Wave	97
Annabooks	88	Digitalk	149	Lenel Systems	49	Scientific Consulting Svcs.	88
Ansoft	122	Disk Software	81	Liant Software Corp.	23	Scientific Endeavors Corp.	85
Apex Software	137	Distinct Corporation	52	Lifeboat Software	66,147	SDA Enterprises	66
Aptech	57	Dyad Software	94	Logical Devices	158	Sentry Software	169
Atlantic Design	144	Devices, Inc.	107	Magna Carta Software	142	Sequiter Software	13
AT&T	155	Evergreen CASE Tools	25	Market Service Assoc.	99	Small Computer Company	101
Autumn Hill Software	84	Fifth Generation Systems	59	Mathworks	157	SoftC, Ltd.	83
Avalan Technologies	54	FlashTek	24	Meta Software	146	Software Blacksmiths, Inc.	111
Base Two Development	21	Fleming Software	119	MicroEdge, Inc.	50	Software Factory, Inc.	165
Berkeley Systems	63	Frontline Software	100	MicroFocus	24	Software Interphase	91
Blackhawk Data	105	Futuresoft Engineering	160	Micrografx	153	Stirling Group	36
Blink, Inc.	123	Genus Microprogramming	35	Micro Systems Design	162	Strandware, Inc.	77
Block Island Technologies	87	Gimpel Software	22,86	Microsoft Corp.	6-7,18,92,IBC	SoftAge Publishing	54
BonAmi Software Corp.	47	GFA Software Technologies	138,159	Microsoft University	51	Software Quality Automation	151
Borland International	IFC,1,33	Globalink	116	MKS-Mortice Kern Systems	127	Symantec	31,61
Building Block Software	80	Gpf Systems, Inc.	46	MMCAD	111	Systems Compatibility	161
Buzzwords	64-65	Greenleaf Software	89,93	N Systems	141	Sun Country Software	106
California Scientific Corp.	117	GUI Computers	143	Nu-Mega Technologies	28	Ted Gruber Software	81,119
CASEWORKS	48	HPI-Helpful Programs Inc.	164	Napier Graphics	160	TeraTech	78,87,140
Catenary Systems	87	IBM	30,42-43,121,129-30	Nova Graph	144	Tools & Techniques	128
Celect Software	143	Information Architects, Inc.	109	Objects, Inc.	81	V Communications	77,110
CLEAR Software	32,112	InnoVision Software	146	Objective Solutions	27	VoiceLink	170
CM Ventures	132	Inset Systems	63	Omaton	154	WATCOM	3,103
Command Technologies	115	Instant Replay	125	Opt-Tech Data Processing	126	Wolfram Research	158
Computer Appl. & Research	128	Invisible Hand Software	2	PH Technologies	155	WordTech Systems	26
Computer Associates	10,145	Island Systems	95	PharLap Software Inc.	BC	Zinc Software	14
		Jetform	148				



ATTENTION SOFTWARE PUBLISHERS & DEVELOPERS

If you are not already advertising in the
Programmer's Paradise® Catalog,
why not join us now?!

Benefit by reaching an audience of proven buyers of software and development tools. We distribute this catalog to a very select group of registered users and/or purchasers of products listed in this catalog. Benefit from being in association with a company with high visibility and an excellent reputation within the software community.

Call the Advertising Sales Department at
Programmer's Paradise today!!

908-389-8950

CALL FAX^{cetera}[®] for 24-hour instant product information!

Like so many of our customers, you may need to do your product research and shopping after business hours. FAX^{cetera} is there to provide the answers to product specific questions any time, day or night. Have information sent directly to your home or office FAX, instantly!

Look for specific FAX^{cetera} numbers in the product description section
—pgs. 75-170.



Here's how:

Call (908) 389-8173 from your touch-tone FAX phone...

And follow the sequence of commands:

Step 1

You will be asked to enter the 8-digit FAX^{cetera} number listed below the product(s) you are interested in (pgs. 75-170). Then...

Step 2

Press 1 to confirm the information you specified.
OR

Press 0 if you made an error, and enter the correct number when asked.

Step 3

Press 0 to receive the information you specified.

OR

Press 1 to select additional product information you wish to receive (limit 3 per call).

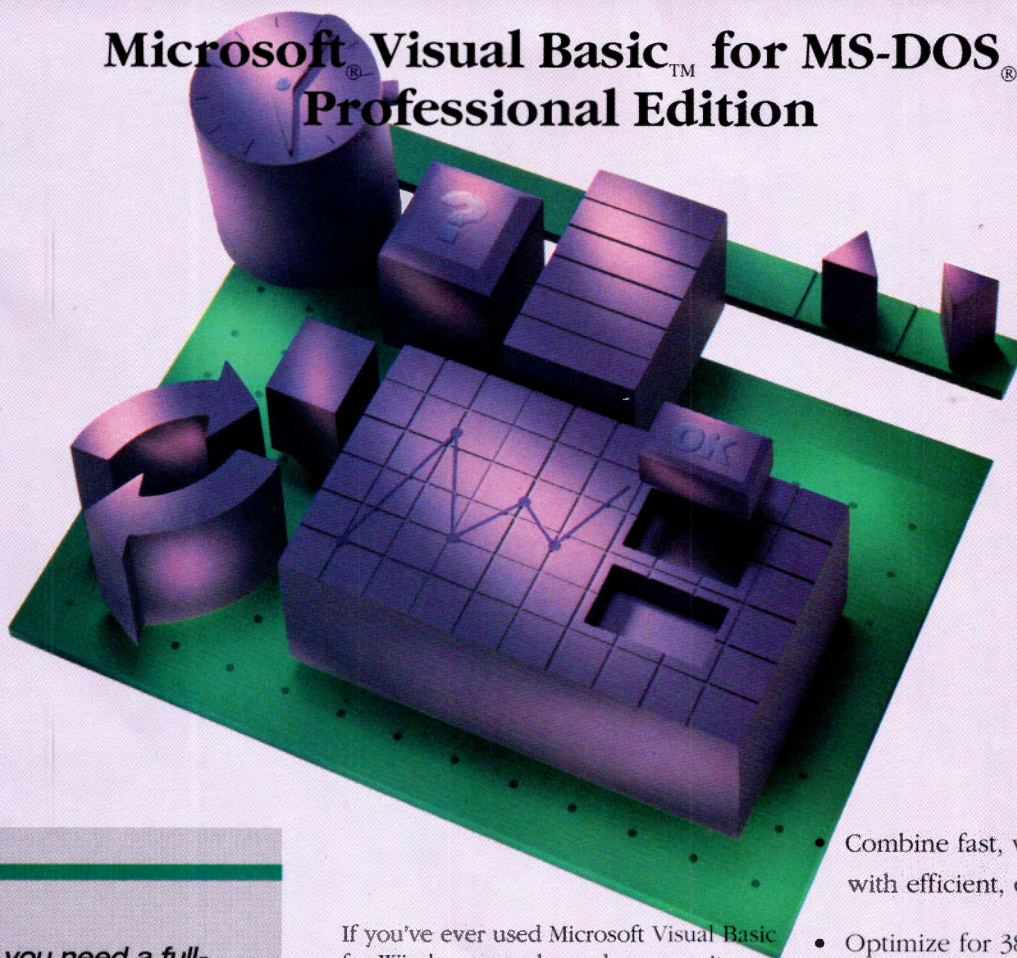
Step 4

At the tone, Press Start/Send on your FAX machine and hang up the receiver. Product information will be sent to you instantly!*

*If you have difficulty retrieving data from FAX^{cetera}, call (908) 389-8950 and ask for Technical Support.

The best-selling programming system for WindowsTM is now available for MS-DOS[®]!

Microsoft[®] Visual BasicTM for MS-DOS[®] Professional Edition



*If you need a full-
featured application*

by yesterday, try

Microsoft
Visual Basic for MS-DOS,
Professional Edition.

If you've ever used Microsoft Visual Basic for Windows, you know how easy it can be to create full-featured applications for the Windows operating system. But what about the MS-DOS operating system? Wouldn't it be great if you could have the same freedom and productivity when you develop for MS-DOS? Maybe you could even write applications that compile for either MS-DOS or Windows! *Microsoft Visual Basic for MS-DOS, Professional Edition*, does all that, so you can create full-featured applications for MS-DOS in record time.

It has all the productivity of Visual Basic for MS-DOS, Standard Edition, plus an optimizing compiler for today's advanced processors. Floating-point math for calculations up to three times faster, and a source code profiler for identifying performance bottlenecks. You even get the overlay technology from Microsoft C/C++, for applications as large as 16MB. All accessible from Visual Basic.

- Combine fast, visual design tools with efficient, event-driven code.
- Optimize for 386/486 processors.
- Use an integrated ISAM database engine to access databases as large as 128 MB.
- Create charts, professional setup programs, hypertext-based Help files, and even your own custom controls.
- Share code and forms with Visual Basic for Windows.

Microsoft[®]
Visual Basic for MS-DOS
Professional Edition

\$337

Competitive Upgrade: \$189

It's a power lover's dream come true!

To order call Programmer's Paradise[®] today! (800) 445-7899

Microsoft and MS-DOS are registered trademarks and Microsoft Quick Basic, Visual Basic and Windows are trademarks of Microsoft Corporation.

The Quality Memory Solution

Phar Lap DOS-Extenders



When your reputation's at stake...

We know how much work you put into building your product. Why use inferior tools that often create more problems than they solve? With a Phar Lap DOS-Extender, you know you're getting industry-leading, market-tested tools that have worked reliably for thousands of developers. Other DOS extenders simply can't measure up. Let Phar Lap show you what a DOS extender should be.

Build multi-megabyte DOS programs with Phar Lap's DOS-Extenders!

286 DOS-Extender™ — it's never been so easy! With our 286DOS-Extender and your Microsoft C, Borland C++ or Microsoft Fortran compiler, you've got all the tools you'll need to quickly and easily build multi-megabyte protected-mode applications — often by simply relinking without making source code changes. Now you can build protected mode applications that access up to 16 megabytes of memory on any DOS-based 80286, 386, 386SX, or i486 PC — without changing development tools! 286DOS-Extender is also compatible with both Borland's Turbo Debugger and Microsoft's linker and CodeView debugger.

386 DOS-Extender™ — the ultimate in 32-bit power. 386DOS-Extender turns DOS into a true 32-bit operating system with a flat, 32-bit address space. Your program can access all the memory available in the machine — up to 4 gigabytes! 386DOS-Extender runs on any DOS-based 80386, 386SX, or i486 PC, and has been used in over 800 applications, including AutoCAD 386 and IBM's Interleaf Publisher. It is backed by a full complement of 32-bit languages, including C, C++, Fortran, Pascal, Ada and Assembler. With true 32-bit performance, you can finally build workstation-class applications for the PC.

Phar Lap Software: Chosen 10 to 1 over all other DOS extenders. Here's why:

	Phar Lap DOS-Extender	Vendor A	Vendor B
Maturity	Over 5 years and 1000 applications	Less than a year	Brand new
Memory Model	Safe	Dangerous	Dangerous
Compatibility	INT 15, XMS, VCPI, DPMI	XMS, DPMI	XMS, VCPI
Library Support	Extensive list of 32-bit libraries	Limited library support	Limited library support
Documentation	Extensive and detailed	Limited	Less than 50 pages



Shatter the 640K barrier and build multi-megabyte DOS applications.



No more suffering with overlays or EMS.



Other DOS extenders can let common programming errors cause system crashes.



Trademark holders: 286DOS-Extender™, 386DOS-Extender™ - Phar Lap Software, Inc.; Interleaf Publisher™ - Interleaf, Inc.; Windows™ - Microsoft Corp.; DESQview™ - Quarterdeck Office Systems. Registered trademark holders: Phar Lap® - Phar Lap Software, Inc.; AutoCAD® - Autodesk, Inc.; Borland® Turbo Debugger® - Borland International, Inc.; IBM® - IBM Corporation; CodeView®, Microsoft®, MS-DOS® - Microsoft Corp.



Phar Lap Software, Inc.
60 Aberdeen Avenue
Cambridge, MA 02138
617-661-1510
FAX 617-876-2972